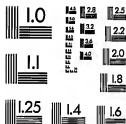





MICROCOPY RESOLUTION TEST CHART
(ANSI and ISO TEST CHART No. 2)





Thomas A Edison Papers

A SELECTIVE MICROFILM EDITION

PART IV
(1899-1910)

Thomas E. Jeffrey
Lisa Gitelman
Gregory Jankunis
David W. Hutchings
Leslie Fields

Theresa M. Collins
Gregory Field
Aldo E. Salerno
Karen A. Detig
Lorie Stock

Editors

Robert Rosenberg
Director and Editor

Sponsors

Rutgers, The State University Of New Jersey
National Park Service, Edison National Historic Site
New Jersey Historical Commission
Smithsonian Institution

University Publications of America
Bethesda, MD
1999

Edison signature used with permission of McGraw-Edison Company

Thomas A. Edison Papers
at
Rutgers, The State University
endorsed by
National Historical Publications and Records Commission
18 June 1981

Copyright © 1989 by Rutgers, The State University

All rights reserved. No part of this publication including any portion of the guide and index or of the microfilm may be reproduced, stored in a retrieval system, or transmitted in any form by any means—graphic, electronic, mechanical, or chemical, including photocopying, recording or taping, or information storage and retrieval systems—without written permission of Rutgers, The State University, New Brunswick, New Jersey.

The original documents in this edition are from the archives at the Edison National Historic Site at West Orange, New Jersey.

ISBN 0-89093-703-6

THOMAS A. EDISON PAPERS

Robert A. Rosenberg
Director and Editor

Thomas E. Jeffrey
Associate Director and Coeditor

Paul B. Israel
Managing Editor, Book Edition

Helen Endick
Assistant Director for Administration

Associate Editors
Theresa M. Collins
Lisa Gitelman
Keith A. Nier

Assistant Editors
Louis Carlat
Aldo E. Salerno

Research Associates
Gregory Jankunis
Lorie Stock

Secretary
Grace Kurkowski

Student Assistants

Amy Cohen
Bethany Jankunis
Laura Konrad
Vishal Nayak

Jessica Rosenberg
Stacey Saelg
Wojtek Szymkowiak
Matthew Wosniak

BOARD OF SPONSORS

Rutgers, The State University of New
Jersey

Francis L. Lawrence

Joseph J. Seneca

Richard F. Foley

David M. Ostlinsky

New Jersey Historical Commission

Howard L. Green

National Park Service

John Macounis

Maryanne Gerbanckas

Roger Durham

George Tselos

Smithsonian Institution

Bernard Flinn

Arthur P. Molella

EDITORIAL ADVISORY BOARD

James Brittain, Georgia Institute of Technology

R. Frank Colson, University of Southampton

Louis Galambos, Johns Hopkins University

Susan Hockey, University of Alberta

Thomas Parke Hughes, University of Pennsylvania

Peter Robinson, Oxford University

Philip Scranton, Georgia Institute of Technology/Hagley Museum and Library

Merritt Roe Smith, Massachusetts Institute of Technology

FINANCIAL CONTRIBUTORS

PRIVATE FOUNDATIONS

The Alfred P. Sloan Foundation
Charles Edison Fund
The Hyde and Watson Foundation
National Trust for the Humanities
Geraldine R. Dodge Foundation

PUBLIC FOUNDATIONS

National Science Foundation
National Endowment for the Humanities
National Historical Publications and Records Commission

PRIVATE CORPORATIONS AND INDIVIDUALS

Alabama Power Company
Anonymous
AT&T
Atlantic Electric
Association of Edison Illuminating Companies
Battelle Memorial Institute
The Boston Edison Foundation
Cabot Corporation Foundation, Inc.
Carolina Power & Light Company
Consolidated Edison Company of New York, Inc.
Consumers Power Company
Cooper Industries
Corning Incorporated
Duke Power Company
Entergy Corporation (Middle South Electric System)
Exxon Corporation
Florida Power & Light Company
General Electric Foundation
Gould Inc. Foundation
Gulf States Utilities Company
David and Nina Heitz
Hess Foundation, Inc.
Idaho Power Company

IMO Industries
International Brotherhood of Electrical Workers
Mr. and Mrs. Stanley H. Katz
Matsushita Electric Industrial Co., Ltd.
Midwest Resources, Inc.
Minnesota Power
New Jersey Bell
New York State Electric & Gas Corporation
North American Phillips Corporation
Philadelphia Electric Company
Philips Lighting B.V.
Public Service Electric and Gas Company
RCA Corporation
Robert Bosch GmbH
Rochester Gas and Electric Corporation
San Diego Gas and Electric
Savannah Electric and Power Company
Scherling-Plough Foundation
Texas Utilities Company
Thomas & Betts Corporation
Thomson Grand Public
Transamerica Delaval Inc.
Westinghouse Foundation
Wisconsin Public Service Corporation

START

213

A Note on the Sources

**The pages which have been
filmed are the best copies
available. Every technical
effort possible has been
made to ensure legibility.**

**PUBLICATION AND MICROFILM
COPYING RESTRICTIONS**

Reel duplication of the whole or of any part of this film is prohibited. In lieu of transcripts, however, enlarged photocopies of selected items contained on these reels may be made in order to facilitate research.

EDISON STORAGE BATTERY COMPANY RECORDS PLANT OPERATIONS AND RESEARCH RECORDS

These records consist of unbound and bound material relating to plant operations at ESBCo factories and to research and development done on behalf of ESBCo by its own Research Department and by Edison's West Orange laboratory. The unbound items consist of periodic operations reports (1905-1924); occasional research reports (1901, 1914-1923); and graphs showing the performance of batteries used in automotive starters (1922-1930). The bound volumes consist of a research notebook (1901-1903); an unfilled orders notebook (ca. 1901-1902); eight receiving books (1901-1916); an automobile test book (1902); five payroll abstract books (1911-1917); and six plant operations log books (1920-1921).

The following categories of documents have been selected: a sample of reports routed to Edison; reports reflecting Edison's direct involvement in, and supervision of, ESBCo procedures and experimental programs.

The following categories of documents have not been selected: rolling mill production reports and other reports not involving Edison; starter battery test graphs; test books; routine purchasing records; payroll books; operations logs.

The selected records are arranged in the following order: (1) operations reports; (2) research reports; and (3) research notebook.

Operations Reports (1905-1924)

This folder contains a variety of unbound periodic reports pertaining to operations at ESBCo plants and to the performance and maintenance of Edison cells. Included are daily, weekly, monthly, and quarterly reports of production and expenses, as well as daily reports by plant inspectors and department managers. The items relate primarily to the chemical works at Silver Lake, New Jersey, and to the plant at West Orange. There are also weekly reports by William G. Bee dealing with storage batteries already in the hands of customers. The authors include ESBCo employees H. A. Altengarten, C. W. Bissell, G. P. Lamb, George J. Peck, C. E. Sholes, and W. E. Wilson. Many of the reports were routed to Edison, and a few contain marginal notations or attached memoranda by him.

Research Reports (1901, 1914-1923)

This folder contains reports and loose notes pertaining to research conducted for ESBCo. Included are procedural reports, as well as experimental reports made by members of the ESBCo Research Department and by laboratory employees. The documents cover the period August 1914-January 1923, but most are from 1919-1921. At the beginning of the folder are two undated items that are probably from 1901. The selected items include material relating to the reclamation of copper and nickel from different points in the battery production process, reports on the performance of experimental and rejuvenated cells, and suggested improvements to the Chemical Operations Shop. Also included are detailed reports of the Flake Separating Department and the Inspection Department, as well as reports on research done in preparation for increases in factory production and reductions in expense. The authors include ESBCo employees Julius J. Austin, Robert A. Bachman, C. W. Bissell, F. W. Cunningham, E. E. Dougherty, Roy C. Mitchell, Walter H. Patterson, Arthur Pedersen, D. S. Sargent, and Frederick W. Zons.

Research Notebook (1901-1903)

This bound volume contains experimental notes and test results by Robert Raft. The book covers the period March 1901-May 1903, but one of the loose items found in the book dates from 1900. The entries deal with a variety of competing storage batteries, including the Jungner battery; a motor and speed controller for electric vehicles; and an electric meter. A blueprint of a "Chloride Accumulator" has been pasted into the back flyleaf.

PLANT OPERATIONS RECORDS NOT SELECTED

Unfilled Orders Notebook, N-01-00-00.04

This undated notebook was used by unidentified employees to record order numbers and estimated amounts of purchases. Some entries have been checked off or crossed out. The loose items found in the book date from the period 1901-1902.

Receiving Books (1901-1916)

These eight bound volumes cover the period July 1901-March 1916. Chronological entries provide information regarding suppliers and items ordered. The entries are initialed, checked off, and annotated to indicate billing dates and order numbers. Purchases include machine work, hardware, chemicals, and other material for research and developmental work on storage batteries and on manufacturing processes and machine tools.

Automobile Test Book (1902)

This volume was used during 1902 and may have been used in previous and subsequent years. Entries by two unidentified experimenters record charge and discharge tests for batteries used in various electric vehicles. Included are data for Baker and Studebaker wagons, as well as a "motor bicycle." There are also entries on "shoes and innertubes" and "accidents."

Payroll Abstract Books (1911-1917)

These five bound volumes cover the years 1911-1917. Weekly entries provide payroll expenses for individual departments at the ESBCo factory, along with expenses for some battery work done at the West Orange laboratory. The first book [Notebook, N-11-01-01.1], covering the period January-February 1911, is by George A. Meister. It includes a note indicating that miscellaneous costs at the laboratory were "rather high for following Reasons: Lab Men on Crane Work, Herter on Submarine Cell, John Ott designing." Another pay book (January 1911-October 1912) by Meister can be found in the archival record group, Thomas A. Edison, Incorporated. The other three books cover the period November 1912-February 1917 and offer a more detailed record of labor costs. They provide information regarding the weekly payroll, the percentages of pay based on piecework and time, the number of cells assembled, and the deduced cost per cell (using the company's A4 cell as a standard). The entries after June 30, 1914, are initialed by Edison. Marginal notations by Edison indicate that he was seeking an expense ratio of \$2.99 per A4 equivalent—a ratio that was seldom obtained.

Log Books (1920-1921)

These six volumes, each pertaining to a different part of the production process, cover the period September 1920-May 1921. The daily entries in the first five books appear to have been made by the same individual.

The first book is labeled "Anode Department, September 1920 to." The entries tabulate anode production, the use of nickel, the amount of nickel on hand, the use and reclamation of copper, and the number of men employed.

The second book is labeled "Chemist's Report — Copper Electrolyte and Nickel Electrolyte." The entries tabulate daily amounts and specific gravities for sulfuric acid, copper sulphate, and nickel sulphate. A comment by Edison has been transcribed on page 34: "Feb 24/21 — Folsom; next Sat (Feb 26) increase gradually (over a period of one day) the acetic acid until baths of nickel show Three 3 gm/l. Edison." Following that notation is another comment: "Three is O.K. now — 2.85 to 3.50 limits."

The third book is labeled "Electrolyte Department, September, 1920 to." The entries tabulate information on pressing and filtering, including amounts and temperatures at various stages, labor, occasional leakage, and the clarity and pH of solutions.

The fourth book is labeled "Storage Battery — Record of Shipping Department." The entries tabulate orders, assembly, and shipment of cells, containers, and other material.

The fifth book is labeled "Rolling Mill — E.S.B.Co. — and Tube & Pocket." The entries tabulate production, scrap material, and labor.

The sixth book is not labeled. The entries tabulate the number of orders, prices, and profits, as well as orders received for each type of cell.

Starter Battery Test Graphs (1922-1930)

These graphs cover the periods 1922-1926 and 1930, but some undated items may be from earlier years or from 1927-1929. The graphs contain information regarding the test of automobile starters with Edison storage batteries. The composition, temperature, and treatment of cells are detailed along with the number of starts, current rating, voltage, and other variables. Some of the tests are labeled as having been performed at Edison's West Orange laboratory.

**Edison Storage Battery Company Records
Operations Reports (1905-1924)**

This folder contains a variety of unbound periodic reports pertaining to operations at ESBCo plants and to the performance and maintenance of Edison cells. Included are daily, weekly, monthly, and quarterly reports of production and expenses, as well as daily reports by plant inspectors and department managers. The items relate primarily to the chemical works at Silver Lake, New Jersey, and to the plant at West Orange. There are also weekly reports by William G. Bee dealing with storage batteries already in the hands of customers. The authors include ESBCo employees H. A. Altengarten, C. W. Bissell, G. P. Lamb, George J. Peck, C. E. Sholes, and W. E. Wilson. Many of the reports were routed to Edison, and a few contain marginal notations or attached memoranda by him.

A sample of less than 10 percent of the documents has been selected. The selected items consist primarily of reports containing substantive Edison marginalia or attached Edison memoranda.

1/11/05/WGBP.

REPORT OF TRIP TO WASHINGTON.

I found the United States Express Co. in Washington had five sets of E 27 batteries in commission. I tested each cell and found only one dead cell, which I replaced. The batteries are receiving very good care. I notice that they had two sets with the old style separators. On these two sets the potash had come out and the batteries were dirtier on top than the other three. We are sending them the new style separator top to replace the old ones on these two sets. We are also sending them a new style electric filler with a low voltage bell. They had neither voltmeter nor ammeter. The man in charge does not know anything about automobiles or batteries. I spent part of each day and part of each night instructing him how to take care of them. We will have to do more or less missionary work with these people to get good results.

I found in the Adams Express Company's wagons, in which they have twelve batteries E 18, the potash low in specific gravity, some of the cells which they had run over practically nothing but water. Some of the batteries needed cleaning very bad. Mr. George, their agent, promised to have these batteries taken apart last Sunday and thoroughly washed. I found three low cells in one battery and three low cells and one exploded in another battery. The low cells were caused by internal short

circuits. I replaced these cells with new ones, and I advised them instead of shipping the low cells back to us, to pour out half the solution and give each cell a hard shaking, then pour out the balance of solution, and then fill with new solution. Our experience has been that these cells will come back to their original capacity. We are shipping them a carboy of 21% potash and a new electric filler and low voltage bell, and instructed them to go over the specific gravity of their cells, and when they find them low to bring up. 11 sets of these batteries have the old style separator tops and the new one is such an improvement over the old, that I think it advisable to ship them new ones to replace all the old ones. The Adams Express Co kindly stood my transportation.

M. G. Bee

ESBC.

For Mr. Edison

EDISON STORAGE BATTERY COMPANY

Inspectors Report

Week Ending March 3, 1906

Found that the trouble with the United Electric Co's automobile was not with the battery but with the motor. Replaced 3 dead cells in New York Hospital vehicle. Found two poor connections on worn battery. Replaced battery of Mr. James Inglis, ~~Exxon~~ American Blower Co., Detroit, Mich., consisting of 36 E 18 cells. This battery is in a Pope Waverley car. Also replaced Senator Crane's battery in Westfield, Mass., consisting of 36 E 18 cells. This battery was also in a Pope Waverley car, but is one of the first cells we sent out in welded cans, and the cans were leaking.

Week Ending March 10, 1906

Had no trouble in and around New York during the week. Delivered to Adams Express Co. on new order eight batteries of 62 cells E 18 each. replaced one set of 60 E 18 cells in Jansden vehicle, Adams Express Co., Washington, D. C. We have several batteries out around the country in pleasure vehicles, which we will have to replace this spring.

W. B. Co.

Explain this

Edison

*OK How
run Mr. Edison
W. B. Co.*

Mr Edison

EDISON STORAGE BATTERY CO.

Inspectors Report

Week Ending July 6, 1907.

J. A. Hearn & Son report two broken E 27 connectors. Replaced two dead E 18 cells in Adams vehicle #217. Also found battery in their vehicle #194 badly shifted. Evidently had run into something. Had same attended to.

Week Ending July 13, 1907

Replaced two leaky E 18 cells in New York Telephone rig #2. Cleaned and revaselined their battery. If this does not help will change the k.o.h. Found one exploded cell in First one battery. Replaced a damaged cell in Lidgerwood battery, caused by a piece of iron falling across the terminal of the cell. Ran a test on Phonograph truck No. 2. Found that it was taking 71 watts per thousand pounds per vehicle mile, which is too high. This truck is 18 months old. They are going to overhaul the bearings at once.

W. G. B. Co.

When Cells are exploded from lack
of water or accident such as the
iron falling over cell who pays
for it = ^{of} ₁₈₉₃ Edison

EDISON STORAGE BATTERY.

Aug. 8, 1907.

Mr. Gilmors:-

Attached is the mileage data on automobiles with Edison batteries. The most of the data was taken from the books of the different firms, and I promised them that we would not publish it. If you should send any of it abroad, kindly request that they do not let it get into print.

W. G. B. C.

[ENCLOSURE]

Mr. Gilmore

TIFFANY & COMPANY'S BATTERIES.

Up to July 23, 1907.

Tiffany & Co. have 21 automobiles with Edison batteries. Their first order was for seven sets and the first battery went into commission in September 1904, 68 E 27 cells in a two-ton truck, and was in service 2 years and 3 months. In that time we only replaced 5 cells, for which if we had made a charge they would have had to pay \$5.25 per cell. The mileage according to the cyclometer was 12558 miles, with a cost for battery repairs of \$26.25. This battery was taken out and they bought a new one in replacement at \$5.25 per cell. The old battery was cleaned, new potash put in, 4 cells taken away from it, making it a 64 cell battery, and put into a one ton vehicle, and is still running. The mileage up to the present time has been 3423 miles, making a total mileage for the battery of 15990 miles, and the battery is still good for 25 miles per day. These figures we obtained from Tiffany's books. Another battery was run 2 years and 2 months with a renewal of 14 cells and a total mileage of 9360 miles.

Auto C, E 27,	ran 5800 miles with a replacement of 12 cells.	64 cells.
Auto E, E 27,	" 4690 " " " " " 17 "	"
Auto F, E 27,	" 7320 " " " " " 9 "	"
Auto G, E 27,	" 9360 " " " " " 23 "	"
Auto J, E 27,	" 6240 " " " " " 11 "	"
Auto K, E 27,	" 7489 " " " " " 16 "	"

All these mileages were taken from cyclometer readings.

In September 1905 they bought 5 more automobiles with Edison batteries. The batteries are still in commission, and have done a mileage of 22 miles per day, at a very low estimate, (as the majority of them do in the neighborhood of 40 miles per day) at an average

[ENCLOSURE]

Tiffany #2

replacement of 7 cells per battery . At an average of 22 miles per day each of these five batteries have done 12012 miles and are still in good shape.

In August 1906 four more E 27 batteries were put in commission. Average mileage per day, 22 miles. Have replaced two cells in one of these batteries , and none in the rest.

One 66 E 18 cell battery, received December 1905, in vehicle A, did 11232 miles, no cell replacement.

One battery of 66 E 18 cells, put in commission Dec. 1906, in vehicle B, had 2 cells replaced and did a mileage at an average of 15 miles per day. Is still running and in good condition.

Their other three batteries have been in commission about a year, at an average mileage of 22 miles per day and at a ^{total} cost of \$294.00 for replacement.

[ENCLOSURE]

ADAMS EXPRESS COMPANY BATTERIES.

Up to August 1st, 1907

The largest users of Edison batteries are the Adams Express Co., who have a total of 151 batteries ; 35 in Washington, D. C., 25 in Philadelphia, 15 in New Haven, Ct., and the balance in New York and Brooklyn.

The Washington batteries are from 1 to 2 1/2 years old. Since we learned about the changing of the potash in a battery (last March), they have not spent one cent on the 35 batteries in Washington except for potash, which amounts to about \$35. These trucks average 22 miles per working day per year. This is the average mileage of the 23 one-ton trucks and 12 two-ton trucks.

The batteries in Philadelphia and New Haven will have been in service a year early this Fall. The average mileage is about the same as in Washington.

The batteries in New York and Brooklyn are nearly a year old, and up to the present time have not cost the Adams Express Co. anything.

The following is the record of the seven batteries which have been in service the longest in New York & Brooklyn.

#160. In commission Jul. 27, 1906, miles to date 8857, 27 cells replaced. ~~64~~

#188. "	"	Aug. 16, 1906,	"	"	"	7719, 3	"	"
#189. "	"	Aug. 1, 1906	"	"	"	8148, 4	"	"
#190. "	"	Aug. 1, 1906	"	"	"	8315, 2	"	"
#191. "	"	Aug. 1, 1906	"	"	"	6445, 0	"	"
#192. "	"	Aug. 21, 1906	"	"	"	7451, 5	"	"
#193. "	"	Sep. 1, 1906	"	"	"	10337, 7	"	"

#160 is Randen two ton truck, weight 4600 lbs., battery 64 E 27 cells

Balance " one ton trucks " 3000 " " 62 E 18 "

[ENCLOSURE]

Up to July 23, 1907

AITKEN AND VANTINE BATTERIES.

Aitken Son & Co. have seven Edison batteries of 60 E 18 cells each.

- #1. In commission Sept. 8, 1905, miles to date 10956, 10 cells replaced.
- #2. " " Oct. 25, 1905, " " " 14042, 40 " "
- #3. " " Nov. 2, 1905, " " " 9325, 5 " "
- #4. " " Nov. 28, 1905, " " " 8602, 19 " "
- #5. " " Nov. 29, 1905, " " " 9612, 8 " "
- #6. " " Dec. 1, 1905, covered, miles 9364, 4 " "

to April 1907, at which time the whole battery was replaced at a cost of \$210. On taking this battery out and changing the solution we obtained 30 good replacement cells. Replacement battery has covered to date 1740 miles with no cells replaced.

- #7. In commission Apl. 1, 1906, miles to date 7072, 8 cells replaced.

Had Aitken paid for all cells replaced at replacement price, it would have cost them a total of \$504. This includes the \$210. Total mileage 70,714. Batteries are all in good condition.

A. A. Vantine Co. have 6 Edison batteries of 60 E 18 cells each.

- #1. In commission Apl. 19, 1906, miles to date 7349, 10 cells replaced.
- #2. " " Apl. 25, 1906, " " " 6465, 5 " "
- #3. " " Apl. 28, 1906, " " " 6172, 1 " "
- #4. " " May 6, 1906, " " " 8139, 4 " "
- #5. " " May 14, 1906, " " " 8252, 10 " "
- #6. " " May 5, 1906, " " " 6704, 8 " "

A great number of these replaced cells, after being brought back and put on test and the potash changed, came up first class. If Vantine had paid for all the cells replaced, at renewal price, it would have cost them \$133. Their total mileage was 43081 and all batteries are now in good condition.

Make of Vehicles- Lansden

Carrying Capacity- 1 ton

Total weight- 3000 pounds

Speed- 10 miles per hour.

[ENCLOSURE]

MISCELLANEOUS BATTERIES IN AND AROUND NEW YORK.
Up to August 1, 1907

James A. Hearn & Son have 4 Edison batteries, 1- 64 E 27 cells and
3 - 60 E 18 cells.

#103. In commission Sep. 15, 1906, miles to date 4993, 6 cells replaced.

#111. In commission Oct. 1, 1906, " " " 6897, 3 " "

#112. In commission Oct. 6, 1906, " " " 6584, 5 " "

#113. In commission Oct. 16, 1906, " " " 5157, 4 " "

Total " " " 23631, 18 " "

all
If Hearn had paid for these cells replaced, it would have cost them
\$73.50.

W. & J. Sloane have an E 27 battery in a two ton truck, 64 cells.
This went into service Oct. 22, 1906 and has run 4397 miles pxx to date.
The first Sloane battery went into commission June 1904 and ran two
years and three months, at which time they bought the present battery
at a renewal price of \$5.25 per cell. They claim to have covered
between twelve and fourteen thousand miles with their first battery.

Kremetz & Co. have one battery of 60 E 18 cells in a Lansden
runabout. In commission Oct. 12, 1906. Miles to date 4620. Cells
replaced, 2. Battery is at present in first class condition.

Aug. 7-07

N.Y. Bee

EDISON STORAGE BATTERY CO.

Labor & Material

Week Ending May 12, 1908.

	Labor	Mat'l &c	Total	<i>Sale</i>
Manufacturing	685.55	67.95	753.50	
General Expense	180.95	177.38	358.33	
Repairs	36.69	3.00	39.69	
Construction	43.87	2.22	46.09	
Machinery & Tools	225.22	297.60	254.82	
Experimental	205.25	29.80	235.05	
			<u>1,687.48</u>	<u>102.45</u>

SALES

1E 18 Renewal Cell	103.50
Repairs & Supplies	78.95
2 new E18 Cells	<u>20.00</u>
	102.45

H Miller

What I want is the cell account
Kept separate & find out just what
we have spent on this during
1st what we have on hand to
show for it & the receipts from
all sources against this kept
I can get no idea from any of this
staff how much is now making
ST. Louis

COST OF 100 POSITIVE TUBES - Part #023

TAKEN FROM JUNE 1911 COSTS

	Quantity required	Material	Labor	Factory Expense	Total
Flake	.438 lb.	\$.6573	\$.2340	\$.2887	\$1.18
Hydrate	.213 "	.9949	.0221	.0279	1.0449
Tubes		.0916	.0974	.1217	.3107
Rings	.1333"	.0353	.0101	.0126	.058
Caps	.033	<u>.0025</u>	<u>.0025</u>	<u>.0032</u>	<u>.0082</u>
		1.7816	.3661	.4541	2.6018
Labor in assembling			.5255	.4069	.7324
		<u>\$1.7816</u>	<u>\$.6916</u>	<u>\$.86094</u>	<u>\$3.3342</u>

NOTE: ABOVE COST DOES NOT INCLUDE SUCH OVERHEAD EXPENSE AS
SHIPPING, RENT, TAXES, ADVERTISING, ADMINISTRATION,
ETC., NOR DOES IT INCLUDE PACKING.

COST OF 100 POCKETS - Part #050
TAKEN FROM JUNE 1911 COSTS

	Quantity required per 100 tubes	Material	Labor	Factory Expense	Total
Iron	1.7145	.6172	.00199	.00249	.6217
Cups	200	.07426	.01758	.02198	.1139
Labor in assembling			.10608	.13260	.2388
					<u>\$.9744</u>

NOTE: Above cost does not include such overhead expense as
Shipping, Rent, Taxes, Advertising, Administration,
etc. nor does it include packing.

3.972 per tube —

1.163 per pockets —

$$\begin{array}{r} 5135 \\ 120 \\ \hline 102700 \\ 5135 \\ \hline 616200 \end{array}$$

Guaranteed to Break

$$\begin{array}{r} 3330 \\ 333 \\ \hline 3663 \\ 309 \\ \hline 3972 \end{array}$$

10% for packing & profit
Royalty (40 cells)

$$\begin{array}{r} 3330 \\ 974 \\ \hline 4304 \end{array} \quad \begin{array}{r} 33300 \\ 30128 \\ \hline 3172 \\ 30124 \\ \hline 15920 \end{array} \quad (77.3)$$

$$\begin{array}{r} 3330 \\ 773 \\ \hline 9990 \\ 2330 \\ \hline 27310 \\ 2574090 \end{array} \quad \begin{array}{r} 773 \\ 40 \\ \hline 30920 \end{array} \quad \begin{array}{r} 227 \\ 40 \\ \hline 9080 \end{array}$$

$$\begin{array}{r}
 977.44 \\
 \underline{974} \\
 10718 \\
 \underline{9,08} \text{ --- Royalty (400)} \\
 1,1626
 \end{array}$$

$$\begin{array}{r}
 1000 \\
 \underline{773} \\
 227
 \end{array}$$

85

Mr. Edison ✓
 Buchanan
 Miller

EDISON STORAGE BATTERY CO.
 RESEARCH DEPARTMENT
 DAILY REPORT

MEADOW CROFT
 Date June 23, 1914

will continue every day

SILVER LAKE HYDRATE (Short Tubes)

Hydrate Nos.	Tube Nos.	1st run	2nd run	After 10 Hot Runs
		weight	.9 V.	.5V. .5V.
Minimum				
Average				
Maximum				

Number of tubes loaded heavier than 7.800 grams.

no test.

FACTORY LONG TUBES

Hydrate Nos.	554 356
Tube Nos.	21903-04-06 to 21913-15-16
	1st run.
	weight
Minimum	15.12
Average	15.504
Maximum	15.791

Number of tubes loaded heavier than 10.800 grams.

SILVER LAKE POCKETS (5-grams)

Mix Nos.	2995
Pocket Nos.	2538-2548
	Capacity at 750 M.A.
	1V. .5V.
Minimum	1.25 2.025
Average	1.250 2.025
Maximum	1.250 2.025

	Capacity at 800 M.A.
	1V. .5V.
	1.885 2.540
	1.880 2.540

FACTORY POCKETS (8-grams)

Mix Nos.	2970
Pocket Nos.	1989-90
	Capacity at 750 M.A.
	1V. .5V.
Minimum	1.204 1.825
Average	1.204 1.825
Maximum	1.204 1.825

	Capacity at 400 M.A.
	1V. .5V.
	1.927 2.327
	1.927 2.327

SINGLE IRON PLATES (B Type)

Mix. No.	2972
Plate No.	588
	Capacity to 1V.
	Run 1 Run 2 Run 3
Weight	10.1610 27.81 24.83
	24.49

note - Loading weight is for entire plate = 16 B-type pockets.

Remarks:

EDISON STORAGE BATTERY CO.
RESEARCH DEPARTMENT
DAILY REPORT

394

Date Nov. 16th 1915

SILVER LAKE HYDRATE (Short Tubes)

Hydrate Nos. 6573; 6574; 6575; 6580-81-82

Tube Nos. Reg. 2543-50

	Loading weight	3rd run	After 10 Hrs	
	SV.	SV.	SV.	
Minimum	7.500			Loading weights
Average	7.517			only
Maximum	7.560			

Number of tubes loaded heavier than 7.800 grams

FACTORY LONG TUBES

Hydrate Nos. 447-449

Tube Nos. 24297 to 24310

	Loading weight	3rd run
	SV.	SV.
Minimum	10.321	1708
Average	10.375	1724
Maximum	10.441	1775

Number of tubes loaded heavier than 10.800 grams

SILVER LAKE POCKETS (6-grams)

Mix Nos. 3322

Pocket Nos. 1517-18 R

	Capacity at 750 M.A.	Capacity at 300 M.A.	Capacity at 750 M.A.	Capacity at 400 M.A.
	I. V. SV.	I. V. SV.	I. V. SV.	I. V. SV.
Minimum	1000 1725	1615 2595		
Average				
Maximum	1100 1812	1690 2650		

FACTORY POCKETS (5-grams)

Mix Nos. 3322 C.P.

Pocket Nos. 2981 - 2984

	Loading weight	Capacity at 750 M.A.	Capacity at 400 M.A.
	I. V. SV.	I. V. SV.	I. V. SV.
Minimum	6.035	300 1825	1640 2555
Average	6.101	3556 1846	1698 2651
Maximum	6.213	397 1862	1733 2713

SINGLE IRON PLATES (B Type)

Mix No. 3341; 3335; 3335 Mix Proportions C.P.

Plate No. 1179, 1180 - 1181

	Loading weight	Capacity to 1. V.	
	Run 1	Run 2	Run 3
6.040	27.49	24.18	22.24
6.240	27.80	23.44	20.93
6.264	30.11	24.26	22.50

Remarks:

Plates #1180-81 will run another cycle, and also be duplicated.
1179 is a duplicate of 1174

Factory pockets Nos. 2981-84 received now N.I. and Solution

(See over for rerun results)

Merun Results

Factory Pockets (8 grams)

Mix. Nos. 3339-3341 C.P.
 Pocket Nos. 2953-54- 2957 -2960

Run 14
 Capacity at 750 M.A.
 1.V .5 V
 1437 2112
 1535 2274
 1625 2587

Run 16
 Capacity at 400 M.A.
 1.V .5 V
 2200 3133
 2355 3384
 2507 3640

For 1st cycle results see report of Nov. 5th, and note on report of Nov. 9th regarding condition of 2957-60.

Factory Pockets (8 grams)

Mix. Nos. 3312 - C.P.
 Pocket Nos. 2929-2932

Run 22
 Capacity at 750 M.A.
 1.V .5 V
 1475 2237
 1565 2409
 1687 2550

Run 24
 Capacity at 400 M.A.
 1.V .5 V
 2227 3175
 2305 3364
 2427 3433

For 1st cycle results see report of Oct. 28th

Silver Lake Pockets (8 grams)

Mix. Nos. 3326 Dup. 3340; 3339; 3341; 3342; 3343; 3344 C.P.
 Pocket Nos. 1465-66 R - 1469-60R

Run 22
 Capacity at 750 M.A.
 1.V .5 V
 1400 1937
 1624 2263
 1650 2562

Run 24
 Capacity at 400 M.A.
 1.V .5 V
 2053 2987
 2284 3110
 2500 3453

For 1st cycle results see report of Oct. 28th.

EDISON STORAGE BATTERY CO.
RESEARCH DEPARTMENT
DAILY REPORT

556

Date May 20 1916

SILVER LAKE HYDRATE (Short Tubes)

Hydrate Nos. 7173-4; 7175-6-8; 7179-80; 7181-2; 1266 FTK. #357;

Tube Nos. Reg. 3991 to Reg. 3990

	weight J.V.	3rd run J.V.	After 10 Hot Runs J.V.
Minimum	10.401	1232	1255 - 1260
Average	10.473	1256	1325 - 1349
Maximum	10.564	1300	1415 - 1422

Number of tubes loaded in water tank 400 grams

1/4" FACTORY LONG TUBES % to

Hydrate Nos. 694; 695; 697; 699;

Tube Nos. 25491 to 25519

	weight J.V.	3rd run J.V.	weight J.V.	3rd run J.V.
Minimum	10.300	1065	5.420	920
Average	10.344	1082	5.438	958
Maximum	10.480	1086	5.458	990

Number of tubes loaded in water tank 400 grams

SILVER LAKE POCKETS (5-grams)

SILVER LAKE POCKETS (8-grams)

Mix Nos. 353213; 35413; 35459; 35501

Pocket Nos. 2239 to 2246 Reg.

	Capacity at 750 M.A. 1 V. J.V.	Capacity at 300 M.A. 1 V. J.V.	Capacity at 150 M.A. 1 V. J.V.	Capacity at 400 M.A. 1 V. J.V.
Minimum	1275 - 1337	1170 - 2995		
Average	1311 - 1340	1329 - 3027		
Maximum	1500 - 2226	1965 - 3070		

FACTORY POCKETS (8-Grams)

Mix Nos. 2443; 2503; 2504;

Pocket Nos. 3599 to 3606; 3611 to 3628

	Capacity at 750 M.A. 1 V. J.V.	Capacity at 300 M.A. 1 V. J.V.	Capacity at 150 M.A. 1 V. J.V.	Capacity at 400 M.A. 1 V. J.V.
Minimum	7.995 - 1170	1875 - 2035	3067	
Average	8.246 - 1431	2351 - 2849	3456	
Maximum	8.400 - 1678	2387 - 3453	3800	

SINGLE IRON PLATES (B Type)

Mix No. 3497; 3490; 3492; 3492 Mix Proportions G. P.

Plate No. 1315 - 1316 - 1317

	weight J.V.	Run 1 J.V.	Run 2 J.V.	Run 3 J.V.
Minimum	6.213	28.76	25.31	24.58
Average	6.240	29.36	23.74	22.80
Maximum	6.244	28176	23.74	22.20

Remarks

These plates will
run another cycle

* S.L. 5 gr. Pockets #2239 to 46 Reg. are out out

See over for rerun results.

R.C.M.

HERON RESULTS

Silver Lake Pockets, (8 Gr.)

Mix Nos. 3473; 3500

Pocket Nos. 2083 -4 Reg. 2115-16 Reg.

	Run #22		Run #24	
	Capacity @ 750 M. A.		Capacity @ 400 M. A.	
	1 V .5 V		1 V .5 V	
Min.	987 - 1412		1773 - 2533	These pockets
Avg.	1181 - 1797		1993 - 2887	are out out
Max.	1437 - 2212		2247 - 3207	

See reports of April 27th, May 3d, 9th and 12th for first and second cycle results.

Single Iron Plates B Type

Mix Nos. 3503 - 3505

Mix Pro C. P.

Plate Nos. 1313 - 1314

Loading	Run #4	Run #5	Run #6	
Weights	Capacity to 1 V.			
6.236	22.50	22.24	22.20	These plates
6.256	23.75	22.76	22.60	are out out

See report of May 17th for first cycle results.

EDISON STORAGE BATTERY CO.
RESEARCH DEPARTMENT
DAILY REPORT

536

Date May 20 1916

SILVER LAKE HYDRATE (Short Tubes)

Hydrate Nos. 7173-4:7175-6-8:7179-80:7181-2:1256 Plk. #357:

Tube Nos. Reg. 3381 to Reg. 3390

	Loading weight	3rd run SV	After 10 Hot Runs SV
Minimum	7.404	1233	1253 - 1260
Average	7.473	1255	1336 - 1349
Maximum	7.564	1300	1413 - 1427

Number of tubes loaded heavier than 7,000 grams

1/2 FACTORY LONG TUBES

Hydrate Nos. 694:695:697:699: 693: 698:
Tube Nos. 25491 to 25518 529 to 534

	Loading weight	3rd run SV	Loading weight	3rd run SV
Minimum	10.300	1736	5.320	930
Average	10.374	1814	5.380	968
Maximum	10.480	1865	5.440	990

Number of tubes loaded heavier than 10,000 grams

* SILVER LAKE POCKETS (5-grams)

SILVER LAKE POCKETS (8-grams)

Mix Nos. 3533:3534:3469:3535

Pocket Nos. 2239 Reg. to 2246 Reg.

	Capacity at 750 M.A. I. V. SV	Capacity at 300 M.A. I. V. SV	Capacity at 750 M.A. I. V. SV	Capacity at 400 M.A. I. V. SV
Minimum	1275 - 2037	1900 - 2995		
Average	1316 - 2140	1929 - 3027		
Maximum	1350 - 2225	1965 - 3070		

FACTORY POCKETS (8-Grams)

Mix Nos. 3443:3503:3504:

Pocket Nos. 3599 to 3606: 3821 to 3828

	Loading weight	Capacity at 750 M.A. I. V. SV	Capacity at 400 M.A. I. V. SV	Pocket Nos. 3599 to 3606 set aside; Nos. 3821 to 3828 are out out.
Minimum	7.995	1137 - 1875	2033 - 3067	
Average	8.246	1444 - 2351	2249 - 3456	
Maximum	8.400	1675 - 2687	3453 - 3800	

SINGLE IRON PLATES (B Type)

Mix No. 3507:3490 amp: 3492 Mix Proportions C. F.

Plate No. 1315 - 1316 - 1317

	Loading weight	Run 1	Run 2	Run 3	
		Capacity to 1. V.			
	6.218	28.76	25.31	24.68	
	6.240	29.36	23.74	22.80	
	6.246	28.76	23.74	22.20	

These plates will run another cycle.

Remarks

* S.L. 5 gr. Pockets #2239 to 46 Reg. are out out.

See over for rerun results.

R.C.M.

RE-RUN RESULTS

Silver Lake Pockets (8 Gr.)

Mix Nos. 3473; 3500

Pockets Nos. 2083 - 4 Reg. 2115-16 Reg.

	Run #22		Run #24	
Capacity @ 750 M.A.			Capacity @ 400 M.A.	
1 V		.5 V	1 V	.5 V
Min.	987	1412	1773	2533
Avg.	1181	1797	1993	2887
Max.	1437	2212	2247	3207

These pockets are cut out.

See reports of April 27th, May 3d, 9th and 12th for first and second cycle results.

Single Iron Plates B Type

Mix Nos. 3503 - 3505

Mix Pro C.P.

Plate Nos. 1313 - 1314

Loading Weights	Run #4	Run #5	Run #6	
			Capacity to 1 V.	
6.236	22.50	22.24	22.20	These plates
6.256	23.75	22.76	22.80	are cut out.

See report of May 17th for first cycle results.

[CA. SEPTEMBER 1919]

file this
you get it every
month
Mr. Edison

Our capital is
too big and we are not
turning it over once a
year and we couldn't
turn it over twice a year
if we had all the
industrial business for which
we can compete.

The attached shows
detail of cost of cell and
that overhead and interest
need surgery and continuous
home treatment.

I feel very strongly
that we must make good

with present facilities and
only otherwise aim toward
a starting cell - rigid
economics - and to remedy
any faults in organization
Shoel

[ENCLOSURE]

EDISON STORAGE BATTERY COMPANY

STATEMENT OF COST PER CELL MANUFACTURED DURING

JUNE, JULY AND AUGUST-1919

TYPE A-4

QUANTITY ASSEMBLED..... 1989

MANUFACTURING COST:

	MATERIAL	LABOR	240¢ FACTORY EXPENSE	TOTAL
501-4 Can Group.....	.1028	.0511	.1226	.2765
504 Cover Group.....	.0690	.0508	.0738	.1736
007 Pole Washer.....	.0243			.0243
008 Pole Insulator.....	.0259			.0259
009 Stuffing Box Gasket.....	.0143			.0143
010 " " Glamd.....	.0011			.0011
011 " " Cap.....	.0301			.0301
080 " " ".....	.0396			.0396
812 Lid Group.....	.0316	.0055	.0133	.0504
817-1 " Spring.....	.0012	.0010	.0024	.0046
827-1 Cotter Pin.....	.0006			.0006
031 Positive Plate.....	2.5245	.7687	1.8446	5.1378
539 " Pole Group.....	.0198	.0149	.0357	.0704
042 Spacing Washer .557.....	.0025	.0015	.0035	.0075
043 " " .227.....	.0025	.0033	.0080	.0138
044 " " .464.....	.0088	.0062	.0150	.0300
045 Split Washer.....	.0067	.0023	.0054	.0144
046 Connecting Rod Nut.....	.0030	.0039	.0095	.0154
049 Negative Plate.....	1.5490	.4576	1.0963	3.1049
553 " Pole Group.....	.0254	.0179	.0431	.0864
558-1 Grid Separator.....	.3113			.3113
060-1 Side Insulator.....	.1266			.1266
573 " Rod Insulator.....	.0783			.0783
067 Pocket Insulator.....	.2019	.0157	.0377	.2553
Plating Material.....	.1275			.1275
Labor- Plate and Anneal.....		.2210		.2210
Expense " " ".....			.5304	.5304
Assembling Labor.....		.1148		.1148
" " Expense.....			.2755	.2755
Total Cost of Cells				
Assembled.....	5.3271	1.7162	4.1190	11.1623
Current in Forming.....	.1062			.1062
Electrolyte.....	.3673			.3673
Rebottle.....	.0130	.0240	.0468	.0838
Cell Test Expense Labor...		.1854		.1854
Total Manufacturing Cost..	5.8136✓	1.9256✓	4.1658✓ (469.9%)	11.9050
Hydrate per Cell.....	1.5277			1.5277
Plate per Cell.....	.2903	.1348	.3238	.7489
Iron per Cell.....	1.3696			1.3696

file - every day
Edison Storage Battery Co.
GENERAL MANAGERS DAILY REPORT

Dated Nov 4

SALES	In A-4 Equivalents			In Dollars Value		
	To-Day	Accum.	Average This Month	To-Day	Accum.	Average This Month
Orders Recd.	1087.	3124	1248	17106.	44475.	17790.
Orders Cans.	-	-	-	-	-	-
Net Orders	1087	3124	1248	17106.	44475.	17790.
Shipped	1205	2656	1062	16464.	50169.	20067.
Unfilled ord.	58862	-	58737	903636	-	904079.
PRODUCTION	In A-4 Equivalents			In Units		
	To-Day	Accum.	Average This Month	To-Day	Accum.	Average This Month
Hydrate	-	1616	697	- lbs.	4208 lbs.	1680 lbs.
Iron Mix	2208	2208	888	5024 "	5024 "	2008 "
Ni Plates	1065	2343	1178	400 "	1100 "	440 "
Ni Tubes Load.	1146	3302	1200	160169	233546	167418
Fe Pockets "	1061	1832	734	133500	281406	92722
Ni Plates Assem.	1049	2727	1093	4680	11957	4782
Fe Plates "	869	2604	1042	5399	17402	6260
Cells Assem.	1097	2321	924	1269	2481	995
INVENTORIES	In A-4 Equivalents			In Dollar Value		
	To-Day	Average This Month	To-Day	Average This Month	To-Day	Average This Month
Hydrate S.E.	35031	39670	01082 lbs.	06461 lbs.	53573.	56434.
" Orange	3515	2216	10160 "	6139 "	5379.	3250.
" Total	38546	41886	11232 "	12600 "	58952.	59684.
Iron Mix S.E.	91080	90173	207209 "	203859 "	125337.	127687.
" Orange	24705	2744	50765 "	32355 "	27060.	28333.
" Total	11785	117317	267964 "	266214 "	163467.	166020.
Ni Plates	8000	8471	3000 "	3156 "	7755.	8186.
Loaded Tubes	11689	12119	2104113	2030789	71119.	68062.
" Pockets	107	38	14500	12273	299.	365.
Assem Ni Plates	10632	3322	55556	61499	39213.	44783.
" Fe Plates	8725	9476	72729	74793	30323.	31213.
Cells in Test	14548	12959	16583	16805	182965.	161101.
Cells in S.E.	48879	49723	38282	39148	421102.	509104.
" in S. Dept.	5882	5102	5114	5350	67254.	65991.
" in all Dept.	68509	68784	61029	61898	671319.	716136.
CELLS TO BE MADE	12815	18495	21571	21263	2291945.	161776.
CELLS OVER ORDERS	26312	26880	21003	21571	289452.	295680.
CASH				Accounts & Bills Receivable		
				and Payable		
Receipts	-	11194.		Receivable	782016.	778412.
Disbursements	-	5966.		Payable	105392.	105569.
Bank Balance	299820.	295901.		Net	676624.	672843.

C. E. Sholes, Gen. Mgr.

Edison Storage Battery Co.
GENERAL MANAGERS DAILY REPORT

*Let me look at
file once month*
E

Date Nov. 13

SALES	In A-4 Equivalents			In Dollars Value		
	To-Day	Accum.	Average This Month	To-Day	Accum.	Average This Month
Orders Recd.	573	11524	1152	12078.	162678.	16267.
Orders Canc.	-	542	54	-	11652.	1165.
Net Orders	573	10982	1098	12078.	150926.	15092.
Shipped	590	10373	1037	9762.	150188.	15018.
Unfilled ord.	59011		59210	794561.		800287.

PRODUCTION	In A-4 Equivalents			In Units		
	To-Day	Accum.	Average This Month	To-Day	Accum.	Average This Month
Hydrate	-	7795	779	- lbs.	2229 lbs.	2023 lbs.
Iron Mix	1312	17028	1702	3432 "	59325 "	5932 "
Ni Plates	1060	11723	1172	402 "	4400 "	440 "
Ni Tubes Lead.	1082	11073	1107	141566	429225	142922
Fe Pockets "	1243	8792	879	164500	120745	120742
Ni Plates Assem.	1068	10539	1053	4673	46362	4636
Fe Plates "	1607	9485	948	6187	55274	5523
Cells Assem.	1552	11472	1147	1106	10936	1093

INVENTORIES	In A-4 Equivalents			In Dollar Value		
	To-Day	Average This Month	To-Day	Average This Month	To-Day	Average This Month
Hydrate S.L.	47718	48001	124067 lbs.	121586 lbs.	65755.	59140.
" Orange	2085	2509	5422 "	5638 "	2873.	2817.
" Total	49803	49510	129489	127224 "	68628.	62057.
Iron Mix S.L.	07057	37247	246231	212780 "	150200.	136646.
" Orange	18881	23834	43428 "	54664 "	26921.	27930.
" Total	125928	121181	289659 "	267444 "	176621.	174576.
Ni Plates	8533	8301	3200 "	3110 "	8272.	8032.
Loaded Tubes	10502	11104	1862274	1788585	54564.	63171.
" Pockets	611	618	77892	82402	1313.	1655.
Assemb. Ni Plates	9264	9802	55309	66922	44185.	44525.
Fe Plates	6008	7530	61146	68674	23235.	25779.
Cells in Test	11519	13645	15073	153869	126709.	152361.
Cells in S.R.	55342	50436	50475	548949	608752.	543501.
" in S. Dept.	6465	5771	7695	6572	71115.	63738.
" in all Dept.	73326	69912	63244	709230	806586.	759900.
CELLS TO BE MADE	7356	9755	16968	18028	80916.	126117.

CELLS OVER ORDERS	21238	24137	16127	19518	235618.	265016.
-------------------	-------	-------	-------	-------	---------	---------

CASH			OBLIGATIONS		
Receipts	11136	16829.	Receivable	734322.	772361.
Disbursements	43322	26563.	Payable	97572	92342.
Bank Balance	218017.	256320.	Net	636750.	580019.

*Does not include long term notes.

C. E. Sholes, Gen. Mgr.

November 18, 1919.

Recapitulation of Inventory Items.

Total of todays
Orange Inventory Items in:

A-1 Equivalents 118827.
In Value

Total of todays
Silver Lake Inventory Items in:

A-4 Equivalents 160998.
In Value

TOTALS	279822.
--------	---------

\$203851.

\$1143911

Note: This report only covers the more important items as listed.

C. R. Sholes,
General Manager.

Edison Storage Battery Co.
GENERAL MANAGERS DAILY REPORT

Dated Nov. 18,

SALES	In A-4 Equivalents			In Dollars Value		
	To-Day	Accum.	Average This Month	To-Day	Accum.	Average This Month
Orders Recd.	376	18215	1555	4709.	252294.	19568.
Orders Canc.	-	543	40	-	11682.	851.
Net Orders	376	12773	1315	4709.	240612.	17827.
Shipped	2851	16046	1189	39068.	234891.	17339.
Unfilled ord.	60129	-	59725	810374.	-	805047.

PRODUCTION	In A-4 Equivalents			In Units		
	To-Day	Accum.	Average This Month	To-Day	Accum.	Average This Month
Hydrate	1732	13055	967	4504 lbs.	33012lbs.	2512 lbs.
Iron Mix	1351	22031	1531	3107 "	51836 "	3932 "
Ni Flake	1333	15978	1182	500 "	5000 "	444 "
Ni Tubes Load.	1122	15022	1113	158922	2015520	149298
Po Pockets "	1200	13258	922	175600	1810475	134209
Ni Plates Assem.	1066	14369	1061	4700	43200	464
Po Plates "	1096	13273	984	6530	107557	7964
Cells Assem.	1178	15764	1159	1180	15043	1113

INVENTORIES	In A-4 Equivalents		In Units		In Dollar Value	
	To-Day	Average This Month	To-Day	Average This Month	To-Day	Average This Month
Hydrate S.L.	46941	43597	127247 lbs	124315 lbs.	57440.	52101.
" Orange	565	2212	1420 "	5833 "	779.	3090.
" Total	43506	45809	128717 "	130148 "	58219.	55191.
Iron Mix S.L.	112054	100968	256725 "	224333 "	157822.	141750.
" " Orange	16421	21914	37759 "	50508 "	22039.	32541.
" " Total	128475	122882	294484 "	274841 "	180061.	174291.
Ni Flake	8533	8367	3200 "	3135 "	822.	8104.
Loaded Tubes	11004	11049	1980871	1815619	75851.	65721.
" Pockets	240	549	37200	72437	756.	1514.
Assem. Ni Plates	5026	5563	47037	51889	28260.	40254.
" Po Plates	6155	7274	38241	65504	14531.	25615.
Cells in Test	12301	13255	15572	15110	135311.	145505.
Cells in S.R.	50221	50525	40161	38002	552341.	551175.
" in S. Rep.	6321	8778	3230	5420	69531.	65521.
" in all Rep.	68843	69563	64983	59782	727272.	723522.
CELLS TO BE MADE	7595	8375	15870	17709	83555.	115229.
CELLS OVER ORDERS	21568	23205	17808	18714	237248.	255261.

CASH		Other Accounts & Bills Receivable & Payable	
Receipts	14588.	16447.	
Disbursements	14423.	24026.	
Bank Balance	163299.	237147.	

Receivable	740195.	752896.
Payable	41248.	81564.
Net	698947.	671332.

*Does not include long term notes.

G. E. Sholes, Gen. Mgr.

Total Inventory, Nov. 1 -	\$1,129,540
" " " 3 -	1,085,922
" " " 4 -	1,094,409
" " " 5 -	1,114,608
" " " 7 -	1,122,433
" " " 10 -	1,121,215
" " " 11 -	1,126,847
" " " 12 -	1,131,329
" " " 13 -	1,142,675
" " " 14 -	1,149,428
" " " 15 -	1,145,054
" " " 17 -	1,159,150
" " " 18 -	1,143,911
" " " 19 -	1,141,243
" " " 20 -	1,168,804

No diminution of inventories
here -

Σ

Paulsen

August 19, 1920.

Mr. Edison:-

Attached is copy of statement from W. J. Kratt, Night
Superintendent of Record Manufacturing Dept. for your information.

F. C. Felling

F. C. Felling

[ATTACHMENT]

COPY

8/19/20.

Mr. Pullin:-

At 12 P M there were two strangers on 3d. floor. I asked them if they desired something. Received the answer that they were just looking around. I did not know either person. During the following hour and twenty minutes, I saw them several times. About one-twenty at foot of stairs I came face to face with one of them and was informed that Mr. Edison wished to see me; the reason was not given. James O'Connor the Foreman of print men accompanied me to Mr. Edison.

Upon seeing Mr. Edison, I found out that Mr. Moore had asked a green man in reference to pressure, and was told he did not know; then regular pressman was questioned and correct answer given. Mr. Moore reported first man's statement to Mr. Edison. I was not aware of this until after our interview.

Some Education
The first person has been in the employ of this Company for two months as a washer; he was being taught pressman operation, so was unable to answer the questions; also, is only in this country about three months - of Irish descent.

Mr. Moore claims he never can find anyone. I cannot see how he intends when he does not know person he is looking for, or will not make himself acquainted.

W. J. Kratt

This man who was being taught was
keeping the pressure right by a
Thermometer? Can you beat it
Edison

[ATTACHMENT]

Major -

Read this report of the
Night Supt -

Σ

EDISON STORAGE BATTERY CO.

PRODUCTION AND SCRAP - DAILY REPORT.

DATE - Sept. 13, 1920

Mr. Edison,
You will get
these only pay
now, (what?)
Don't understand this

See me about
this

	ROLLING MILL	TUBE & POCKET	REMARKS
PRODUCED	7,907 POUNDS	5,332 POUNDS	Includes the 11 th
GENERAL SCRAP	2,011 "	246 "	
ANNEALING SCRAP	41 "	9 "	
TOTAL SCRAP	2,052 "	255 "	Total days scrap - 2,307 pounds
NET PRODUCTION	5,855 "	5,127 "	

COPIES:-

T-A-EDISON
CHAS. EDISON
F-D-FAGAN.

SIGNED -

G. P. Lamb

EDISON STORAGE BATTERY CO.
DAILY REPORT

Rolled Steel Strip Date September 12, 1920

Operation	Weight in Pounds			Remarks
	In	Out	Loss	
3-7/8x065 Floor	7820	7820		
065-028	7300	7130	170	
028-018	3482	3450	32	
018-014	4164	4140	24	
014-3/3/4	2300	2300		
3-3/4x014-012	3653	3653		Finished Stock
3-7/8x014-011	2677	2645	32	
014-009	1495	1495		
011-009	2669	2645	24	
009-007	8906	8740	166	
007-5 st. 760	3541	3335	206	
007-2 st. 860	2506	2300	206	
1x007-005	2479	2399	80	
1x005-940	552	412	140	Finished Stock
860x005 Revin	460	460		
860x005-003	1616	1450	166	
860x003-800	863	723	140	Finished Stock
760x007-004	1762	1672	90	
Revin	600	600		
004-003	1435	1317	118	
760x003-700	1384	1067	317	Finished Stock
anneal		14463	41	Summary
anneal			70.52	Produced 7907 rounds
				Scrap 2052 rounds Value \$170.73 new
				Net Production 5855 pounds
				Pay Roll \$371.28
				Cost of Raw Material \$8.32 per 100 rounds
				Total Scrap Loss \$124.05 Scrap value

Copies to T. A. Edison, Chas. Edison, F. D. Fagan

Signed C. S. Wilson

9-14-20

Sept. 11 and 13

2045	2	2043	Ends; Twists; Bad edge
2556	⑨	2547	Laminated stock; charge mil
2534	22	2514	" " burns, ends
2906	38	2868	Ends; burns; faulty grind
2256	38	2218	" " " "
3162	9	3153	" " " "
2888	137	2751	Starts; ends; faulty tubes
769		769	
1187		1187	
1037		1037	
1344		1344	
1301		1301	
1638		1638	
92		92	
58		58	

2751
2376
5187
255

John R. Lee
J.R.L.

EDISON STORAGE BATTERY CO.

PRODUCTION AND SCRAP - DAILY REPORT.

DATE - Sept. 16, 1920

	ROLLING MILL	TUBE & FOOT	REMARKS
PRODUCED	7,984 POUNDS	3,558 POUNDS	
GENERAL SCRAP	1,280 "	179 "	
ANNEALING SCRAP	26 "	0 "	
TOTAL SCRAP	1,306 "	179 "	1,485 lbs.
NET PRODUCTION	6,678 "	3,359 "	

COPIES:-

T.A. EDISON.
CHAS. EDISON.
T.D. FAGAN.

SIGNED -

C. P. Lamb

35%

EDISON STORAGE BATTERY CO.
DAILY REPORT

Rolled Steel Strip					Date September 16, 1920
38185		Weight in Pounds			
Operation	In	Out	Loss	Remarks	
3-7/8x065 Pickle	7360	7360			
065-028	3795	3795			
028-014	2677	2645	32		
014-011	2722	2705	17		
014-3-3/4	3520	3520		Finished Stock	
014-009	690	690			
011-009	6915	6900	15		
009-007	6900	6900			
007-1 st. 760	6190	5980	210		
007-5 st. 760	2159	1955	204		
1x07-005	2100	2078	22		
1x005-940	1161	990	171	Finished Stock	
860x007-004 1/2	96	96			
Rebind	1484	1484			
004 1/2-003	758	682	56		
860x003-600	1578	1524	244	Finished Stock	
760x004 1/2-003	1577	1559	18		
Rebind	604	604			
004 1/2-003	1675	1643	32		
760x003-700	1005	834	171	Finished Stock	
Amesal	25320		26		
Misc. Scrap			98	Summary	
		1306		Produced	7984 pounds
				Scrap	1306 pounds value \$108.66
				Net Production	6678 pounds
				Pay Roll	\$349.90
				Cost of Raw Material	\$8.32 per 100 pounds
				Total Scrap Loss	\$79.85
				Signed	<i>Edison</i>

Copies to T. A. Edison, Chas. Edison, F. D. Fagan

*See me
Sent a lot of the
scrap punch
press down*

9-18-20

Sept. 16, 1920

2118	3	2115	Ends; bad edges
2130	6	2124	Bad margin; twisted stock
2101	28	2073	Faulty grind; burns; ends
1996	31	1965	" " " "
2192	14	2178	" " " "
2085	15	2070	" " " "
1857	82	1775	Starts; faulty joints; ends
1427		1427	
1129		1129	
1435		1435	
1177		1177	
1050		1050	
1160		1160	

1775
 1584
 3399
 179

For Rec

EDISON STORAGE BATTERY CO.

PRODUCTION AND SCRAP - DAILY REPORT.

DATE - Sept. 17, 1920.

	ROLLING MILL	TUBE & POCKET	REMARKS
PRODUCED	7,368 POUNDS	2,983 POUNDS	
GENERAL SCRAP	1,739 "	127 "	
ANNEALING SCRAP	29 "	0 "	
TOTAL SCRAP	1,768 "	127 "	1,895 lbs.
NET PRODUCTION	5,600 "	2,856 "	

COPIES:-

T.A. EDISON-
CHAS. EDISON.
F.D. FAGAN.

SIGNED -

G.P. Lamb

EDISON STORAGE BATTERY CO.
DAILY REPORT

Rolled Steel Strip.		Date Sept-ber 17, 1920																
38 1075																		
Operation	Weight in Pounds			Remarks														
	In	Out	Loss															
3-7/8x065 Pick	6900	6900																
005-009	2320	2300	20															
006-012	6950	6900	50															
018-014	7866	7850	16															
014-2-3/4	3105	3105																
3-5/8x014-013	2279	2279		Finished Stock														
3-7/8x014-011	3250	3220	30															
014-009	4025	4025																
011-009	2576	2590	14															
005-007	3715	3665	50															
007-5 ct. 760	805	805																
007-2 1/2 - 11	2787	2870	83															
1x007-005	2479	2461	18															
1x005-940	1235	1054	181	Finished Stock														
560x007-0045	265	265																
ReWind	736	736																
560x0045-003	1411	1359	52															
560x003-800	1468	1208	260	Finished Stock														
760x007-0045	1646	1613	33															
ReWind	760	760																
760x0045-003	1111	1059	52															
760x003-700	1468	1059	409	Finished Stock														
Total Annual		24765	29															
MISC. Scrap			256															
		1768																
				<table><tr><th align="left" colspan="2">Summary</th></tr><tr><td>Produced</td><td>7368 pounds</td></tr><tr><td>Scrap</td><td>1768 pounds Value \$247.10</td></tr><tr><td>Net Production</td><td>5600 pounds</td></tr><tr><td>Pay Roll</td><td>\$369.62</td></tr><tr><td>Cost of Raw Material</td><td>\$6.32 per 100 pounds</td></tr><tr><td>Total Scrap Loss</td><td>3106.88</td></tr></table>	Summary		Produced	7368 pounds	Scrap	1768 pounds Value \$247.10	Net Production	5600 pounds	Pay Roll	\$369.62	Cost of Raw Material	\$6.32 per 100 pounds	Total Scrap Loss	3106.88
Summary																		
Produced	7368 pounds																	
Scrap	1768 pounds Value \$247.10																	
Net Production	5600 pounds																	
Pay Roll	\$369.62																	
Cost of Raw Material	\$6.32 per 100 pounds																	
Total Scrap Loss	3106.88																	

Copies to T. A. Edison, Chas. Edison, F. D. Fagan

Signed *W. E. Wilson*

9-18-20

Sept. 17, 1920

2205	2	2205	Ends; bad edges; twists
1817		1817	
2009	8	2001	Faulty grind; turns; ends
2196	30	2166	" " " "
2047	7	2040	" " " "
1629	9	1620	" " " "
1587	62	1525	Starts; faulty tubes
595	2	593	Ends; broken edges; etc.
1098		1098	
1068	1	1067	" " " "
919	2	917	" " " "
855		855	
958	4	954	Cloudy perfor; narrow margin
1525		1525	
1551		1551	
2856		2856	
127		127	

Copyright - P. A. MASON, CHICAGO

1525
 1551
 2856
 127

Gruber

11/29

Mr Edison -

Attached is information
on Power Service

Week of Aug. 7 - under Riker

" " Nov. 20 - " Talman

as requested -

Geo. A. Munster

Meadocraft -

please dig this out

Show total men of all that
" " pay who under

Riker that is now under
Talman to get the
Comparison - Σ

[ATTACHMENT]

Comparison of Pay Rolls				D 1920 TAE. S.E.			
August 7 under Riker				Nov 20 under Jalemadge			
	No. of men	Pay Roll			No. of men	Pay Roll	
Office	43	\$1951.11		Office	32	\$1476.77	
Orange Steam	51	2880.12		Orange Steam	36	1356.68	
Station Operation	7	325.54		Station Operation	6	244.45	
Silver Lake	19	761.23		Silver Lake	19	703.23	
	120	\$5118.00			93	\$3781.13	
Savings:							
Men 27							
Money \$1336.87							

Lowell, Mass.

[illegible]

[ATTACHMENT]

Case of 7 th 1920	RIKER	Nov. 20-1920	TALLMAGE
	1632 11		11538
Mary Merritt	2500	Mary Merritt	2500
E. M. Merritt	2500	E. M. Merritt	3500
Goodwin Merritt	4000	Goodwin Merritt	4000
Geo. T. Merritt	3600		
W. P. Merritt	4000		
Clayton Merritt	3000	Alfred Merritt	3200
M. S. Merritt	3500	M. S. Merritt	3500
Thos. Merritt	4000		
H. G. Merritt	3500		
	4551 11	Alfred Merritt	4500
	4551 11	A. L. Merritt	3000
	4551 11	H. T. Merritt	4539
			1476 77

Gang 7
 43
 37
 (Under Riker)
 (Under Tallmage)

Mr. Edison has made following note: "Fagan: Note this packing box report. There is no sense of economy in any part of all the Edison Plants. There will be when I am through. Edison" Sept. 6, 1921.

Mr. Edison:

Inspector Bissell reports as follows:

FILE COPY

1st report. In the Old garage across Ashland Ave. there is now stored a closed automobile. This car was used as an experiment some time ago. The motor was removed and storage batteries were substituted. This car, minus its storage batteries, has been standing in the Garage for some time on its tires. All tires are in excellent condition. I would suggest that the car be jacked up and the weight taken off tires, which are getting soft. I do not know who is responsible for this car.

2d report. Condition at gate running through Bldg. 130 mentioned in my report of Sept. 1st are very much better. The old gateman, was laid off and another man put on the job. This new man is right on the job outside, and has gate open so there is no slowing up of trucking going through.

1st report. Batteries are shipped out of this plant in brand new packing boxes made here in the Carpenter Shop. A considerable quantity of these boxes, made here, come back to this plant when customers send batteries back to be repaired.

Boxes that come back to us are used to pack 3d class cells in and are trucked to Silver Lake to be salvaged and parts reclaimed. I am told a large quantity of boxes are piled out at Silver Lake. With lumber so high priced, it seems to me a waste to use nothing but brand new shipping boxes. A large number of boxes are in nearly perfect condition when they return and could be used over again.

My suggestion is this. When cells are removed from a box that has been shipped in, set box aside if in good condition. When a few have accumulated, truck them over to carpenter shop. One man there could make whatever repairs are needed, scrape or sandpaper off the markings and store them in old garage. He would have to keep track of quantity of different sizes and would issue boxes to Shipping Dept. as needed. I doubt if this would take the entire time of one man - even if it did, I believe it would pay.

The reason this was never done here it seems is because of a possible bad effect on the customer if he receives a shipping box that had been used before. This is absolutely negligible in my opinion. This is under supervision of Mr. Monahan.

H. A. ALFENGARTEN.

Copies to Messrs. Fagan, Sheldon, Monahan, E. J. Smith, Egerton. *sent*

December 1, 1921.

FILE COPY

Mr. Edison:-

INSPECTOR BIRSELL OF STORAGE BATTERY REPORTS:

(1) Note a considerable amount of scrap nickel anodes from flake plating dept. has been added to the nickel and copper scrap piles on 1st floor of building #137. Anodes that are partially used up are turned over to parts plating dept. The above scrap, however, is I understand in excess of the amount that can be used in parts plating dept.

Dykeman

There is, I am told, in the neighborhood of 5 tons of this scrap. Is this of any use elsewhere in the industries?

Monahan

Sent

(2) In flake separating dept., note among the sheets waiting to be cut up one sheet badly burnt. Attach small sample of this. They go ahead, cut this up and try to get some flake out of it without much success. Why not scrap this sort of stuff in the plating dept. instead of sending it up to be separated?

Hunter

(3) In tube load dept., noticed there were three drums of hydrate that could not be used and had to be sent back to Silver Lake. The difficulty with this lot of hydrate was the presence of large pieces of hydrate. This would not load properly.

Suggest attention be paid to so-sieving of hydrate at Silver Lake.

Egerton

(4) Note the presence in the flake that reaches tube load dept. of about 9% of flake pieces that go thru #20 mesh screen. This is not exactly the so-called "fines" but appears to be either smaller squares or flake that is broken up.

H. A. ALTMAN/GARTEN

On item No. 1 - Mr. Edison wrote a note to Dykeman, which was sent him, as follows:

"Why is not this Nickel shipped to Silver Lake for making hydrate. / We are trying to clean up all the Nickel we can find to prevent buying new nickel." E

FILE COPY

December 9, 1921.

Mr. Wilson:

INSPECTOR BISSILL OF STORAGE DEPTMENT REPORT:

(1) In flake separating dept., note that flake drying is bad, where pans of wet flakes are dried was very hot this afternoon and the two doors to drying room were open. This seemed like a waste of steam because there is a circulation of air thru the room and the heat is carried out.

Sheldon

Asked foreman why doors to drying room were left open and was told he didn't need steam on in there because his flake was dry but had to keep it on so chem. operations dept. could get sufficient distilled water for their work. He said he didn't want it on because there was work to be done on flake screen and it was too hot for a man to work in there for any length of time.

Is this consumption of steam absolutely necessary?

One of the radiators in dept. (on south side) was hot at the same time. Suggest all steam in radiators be turned off if doors to drying room are open. This furnishes sufficient heat to warm the dept.

You made the following comment:

"Bissell

"Heat doesn't dry anything. It's the air that removes moisture and heat simply increases its capacity for water. Without circulation of air, no moisture is removed cold or hot in re. flakes."

(2) Difficulty is being experienced in heating the iron load dept.

Sheldon

There is a suction system in operation there that exhausts the air and it is necessary to admit air from the interior of the shop. A strong current of air is drawn in from opening above partition. This cools the air in iron load dept. and necessitates a large steam consumption to warm the dept.

I find that much of the cold air entering dept. comes from open elevator shaft outside. Air rushes up from the 1st floor. This is near door of receiving dept., which is frequently open. Consequently the air that comes up to 4th floor is good and cold. This elevator is used seldom.

Suggest the foreman of receiving dept. and the foreman of iron load dept. be held responsible for keeping the metal fire doors in front of elevator shaft closed. I tried this out and found this stopped any current of air being drawn up.

The temperature in iron load dept. today was 56° - rather low.

(3) Note the 3rd of the automatic cranes on 5th floor of bldg. 137 is now in operation.

(4) The flake was irregular today. Loading weights ran all the way from .0036 to slightly above .0045.

Egerton

H. A. ALDERMAN

*Bussell - It doesn't have to get
nickel into Copper solution
but its fatal to get Copper
into nickel solution - that's
the real reason of unequal
leaching*

From H. A. Alton-Barnard
To: Mr. Egerton.

DIRECTOR BUREAU OF MINES, WASHINGTON, D. C.

(3) Note that the automatic crane does not appear to be getting a sufficient flow of wash water against the crane. When crane is falling from the nickel to copper it comes a very short time for washing. The flow of water, when going in this direction, was considerably less with this crane than in the case on the other two cranes.

When crane comes back from copper to nickel it receives a longer wash, yet not as much water is sprayed on down as the other cranes get.

Yours,

Mr. Edison

*It has been getting
all the water it needs and
"then some" for safety.*

Egerton

Mr. Edison:

*My report concerned the flow of water
against drums at that particular time.
I notified foreman of dept. at the time
I made this was corrected because on
next tour around noticed this crane was
getting a flow of water equal to the other cranes*

December 13, 1921.

Mr. Watson:-

INSPECTOR MISCELL OF STORAGE BATTERY REPORTS:

(1) Note a change has been made in stamping the type of cell on cover. Instead of just A4, A6, etc., there is added "Made in U.S.A."

(2) Monthly fire drill was held for this plant at 1:35 P. M. today.

Sheldon

(3) Metal partitions have been built to enclose cell test dept. so that temperature may be regulated. Sheet metal was used for this job from stock on 1st floor. Some of these sheets are left over and are piled on floor near South partition. Suggest they be put back into stock.

Sheldon

(4) There is a solution tank at ceiling in flake separating dept. Solution is pumped up there from chem. operations dept. The signal system for tank to show when solution has reached the proper height did not work this morning with the result solution overflowed to floor around cutting machines and gave some trouble - men had to stop work and then clean it up.

Sheldon

(5) There are two holes in steam pipe under flake separating carrels that squirt water and steam. Understand this was to be repaired when separating operations were completed and stove could be shut off.

Monahan
Egerton

(6) On 4th floor, bldg. #137, chem. operations dept., looked over copper carbonate sludge from one of the filter presses. Noticed there were layers of nickel flake in this. There appears to be considerably more flake in this sludge than ordinarily.

An examination of the flake in this sludge showed in addition to "fines", (which are bound to be present) some squares of flake of correct size. These larger pieces should not, I believe, be present.

Suggest the screens in flake separating dept. be looked over carefully to see if there are not holes or tears in them that would permit good flake to go down with the copper solution, wash water, etc.

Egerton

(7) Flake was light weight today again.

All of the readings taken that I saw were excessively low with the exception of one.

H. A. ALDERMAN

of ~~Tagan~~ ^{sent Tagan}
^{typed by me 11/22/21}
~~Bispege~~ ^{reports you are}

adding to stamp
on cell made in USA

What is the reason.

If on account of
Canada shipments
then just mark only
those shipped to
Canada, not all our
cells - there is good
reasons for this
Edison

December 19, 1921. JWH-772

From: H. A. Altengarten
To: Mr. Monahan

INSPECTOR BISSELL OF STORAGE BATTERY REPORT:

(1) Notice once again that UZA cells are being improperly dipped in battery oil in dope and treat dept. Valve is being covered with the oil and poles are covered on about 50% of the cells.

REPLY:

The UZA Cells are vaselined and workmen are instructed to be careful about getting any vaseline inside of the cells. The Foreman has been questioned about this, and says he has always exercised great care on this operation. This is not a frequent occurrence.

J. F. Monahan.

(2) Found a pile of scrap from punch press dept. of punchings from operation of blanking nuts. In looking over this scrap found a great number of cut blanks thrown out with the scrap. Called this to Foreman's attention. He set man to work picking the blanks from the scrap.

REPLY:

This is not a frequent occurrence, and foreman has been cautioned to watch scrap when taken out of his Department.

J. F. Monahan.

Monahan - Careful instructions to workmen is worth nothing why cant a simple dip device be made so workmen cant or are unlikely to make mistakes

Calling foreman's attention is of no avail - if you had a seal foreman would not find these things - Inspector

Will make up a dipping device -

Monahan

Noted

Bissell

return to Altengarten

Had

December 27, 1921.

From: H. A. Altengarten
To: Mr. Sheldon

INSPECTOR BISSELL OF STORAGE BATTERY REPORTS:

- (1) 2nd report. Pool of nickel solution, previously reported, is still on floor at West end of 6th floor, flake separating dept. under solution tank. Suggest it be cleaned up. This attacks concrete.

REPLY:

This report should have been sent to Mr. Egerton, as I have no supervision in the Flake Separating Department. I did, however, call the matter to Mr. Egerton's attention.

W. M. Sheldon.

- (2) Two sheet metal partitions have been placed in Cell Test Dept. and one in Tube Load Dept. Would it not be well to give these partitions a coat of paint soon to prevent rust?

REPLY:

It was proposed about a month ago to paint these partitions, but it was not thought desirable to spend the money to paint same. As these partitions were erected from obsolete sizes of grid stock which have been in the plant for at least four years and have not as yet shown much evidence of rust, it is not believed that any serious damage will be done if they are not painted until next summer.

W. M. Sheldon.

- (3) The large fire door between grid plating section and ribbon plating section of 1st floor, parts plating dept., is badly rusted and corroded. Suggest it be given a coat of paint.

REPLY:

This fire door will be painted as soon as we can find time to do so. We are at the present time painting the iron work and fire doors on the inside of the building and naturally will paint this door when we come to it.

W. M. Sheldon.

Noted:
Bissell

Altengarten
will Egerton
apt this
you do not
reminds
on it
don't know
if 2 weeks
yet it
of 2 hours
100

Mr. Edison -

Egerton got
JAN 2 '22
this same time
Sheldon did - as
it was again reported
in last night's report
by Bissell and marked
for Egerton, thought you
would see it. Will be more
explicit on these items. even

Bissell - What have you to say to this

January 9, 1922.

From H. A. Altengarten
To Mr. Egerton.

INSPECTOR BISSELL OF STORAGE BATTERY REPORTS:

(7) Notice there is trouble with automatic crane #2 in dropping when in the wash section.

This did slight damage to wash pipes.

REPLY:

Mr Edison

I do not get this about
a crane dropping on the wash,
because it did not happen.
The inspector noticed it"
the report says. It did not.
It either guessed it or
someone has "filled him
up"

Egerton

Mr. Edison:-
Cons with you on this.
In the future on such cases, will
attend to myself and follow your
report
Jan -
11/2

January 9, 1922.

From: H. A. Altengarten
 To: Mr. Lamb.

Monahan *Return to*
HAA

INSPECTOR BISSELL OF STORAGE BATTERY REPORT

(2) Noticed a drum of electrolyte being rolled on freight car had some sort of foreign material in it - sounded as though there were a lot of small stones inside. Suggest more care in cleaning the inside of drums.

REPLY:

This should not occur.
Will call to Mr. Monahan's
attention and have him
instruct foreman in charge
to watch and be more
careful.

Jan 11

The type of foreman Monahan likes & keeps
can't be instructed its impossible, as
am finding it out every day

Edison

CHARLES EDISON.

FD
DIVISION:

Memo. No. 760

SUBJECT:

Milling Machine Matter.

Date 3/19/24.

Mr. Edison:

W.C.
Took up attached report with Dr. Stringfellow and got him committed to using the Phonograph Works' machine whenever it seemed expedient to do so, as in this case. In other words, he is going to see to it that there is no foolish antagonism set up against having necessary work done in the Phonograph Works.

Enc-

W.C.
CHARLES EDISON.

[ENCLOSURE]

Report #115

February 20, 1924.

Mr. Edison:-

For Reply

INSPECTOR HASTENSON OF STORAGE BATTERY REPORTS:

(1) I notice in the Automatic Screw Machine Dept., second floor, building #130, that while half of the automatics were shut down for lack of orders, all of the milling machines were being employed continuously, which is the usual state of affairs. With full operation of these machines during slack production of the department suggests that there are not sufficient milling machines to take care of normal production easily. In fact I believe that this is the one limiting factor in the Battery that everything else must wait on, for these machines can mill only a certain number of pole pieces in a day, and batteries cannot be assembled without pole pieces. With this matter in mind I have made inquiry thru one of the other inspectors who advises me that there are machines suitable for doing this kind of work located in the Phonograph Works, and which are at present not used at all.

I would suggest further inquiry be made in this matter with a view of moving some of these machines over to the Battery.

Mr. Edison's note:

"Stringfellow - Note what inspector says about machines in Phono. Works, which I think are now idle.

Edison."

REPLY:

In the present manufacture of poles there is a great deal of waste due to cutting the poles on screw machines out of bar stock. In order to overcome this waste the idea of forged poles was proposed. It has been worked out and a forge has been ordered. It is awaiting the working out of some minor die difficulties. With forged poles the material to be removed by milling is reduced over 50%. Our present milling equipment, such as it is, would then be entirely adequate. Under the circumstances, I do not believe the purchase of additional milling equipment from the Phono. Works to be a good move at this time.

reply attached.

(2) I noticed one of the pocket side punch presses punching out sides with sides falling 50° off from normal right angle desired. This condition will make it difficult to load into the forming machines, and to make the pocket. I am attaching two for your examination.

I would suggest that a little more care be taken to keep this angle as nearly right as possible.

REPLY:

This condition crops up once in a while. It is due to springy pocket stock. The forming dies function properly but the sides spring out after the pocket cup is formed. The first operation on the pocket cup assembling machines corrects this condition.

Messrs. Delhouser, Weed and Shaw report no trouble with our present run of finished pockets.

Bissell

Copy to Mr. Stringfellow

H. A. ALBENGAERTEN

[ENCLOSURE]

Mr. Edison:—

See next Charles

March 2, 1894

Re Milling Machine Matter, Report #113, item 1.

This drop-forging idea for pole pieces, I question very much if it will be practical even tho it is worked out, or more economical, and while it is ordered, and should do all that is hoped for, I don't believe it could be gotten into production for six months. Meanwhile the choked-up conditions are emphasized by continued full operation and possibly overtime on these milling machines, while but one-third to one-half of the automatic screw machines are working and this condition has existed for about a month. With the general prosperous condition of the country and in particular of the railroads, this slack state of affairs is but temporary, I think. As things are here, if some hurry up orders of any size come along, we simply can't give a quick delivery even tho we are slack! The resistance to the idea because of purchasing cost while admitting the need now, seems to be just a little stubbornness in the Battery, for the purchasing would in final analysis be a bookkeeping item, and if there is not the slightest doubt about this being but a temporary need, why not make arrangements with the Phonograph Works for doing some of this milling work there. No difficulties present themselves save transporting a truck load of the semi-finished ^{and}. I have been assured

[ENCLOSURE]

that they have idle machines capable of doing
our heaviest and slowest milling operation
that of the #12 pole piece over there.

Edward Weston

Report #183

May 13, 1924.

Mr. Edison:

Charles = Somebody organized a belt dept
I don't remember who it had a man -

INSPECTOR MASTERSON OF STORAGE BATTERY REPORTS:

(1) There was a considerable loss of time in starting up the furnace this morning in the Parts Annealing Section of the parts plating, due to breaking of the belt on the blower. The man in charge got another piece of belting, repaired same and got the blower into operation. The belt even now is worn out. I have noticed other belts around in need of "picking up" too. About five months ago I took around the Battery a man attached to the M. & C. Division, who was supposed to be an expert on belts, and who was, I believe, to look out for the care and maintenance of belts in all your industries. Just what this man's duties consist of, I am not competent to say, but it may be news of interest to you to know that I have not seen this belt expert in the Battery buildings or anywhere else since I took him around originally. I believe he is still with the Company.

I would suggest this matter be looked into and that a new belt be held in readiness for this blower.

REPLY:

thing but somebody must see what its run night
deft its exposed
hows a belt
all perhaps
deft why this
man don't attend to his
deft
706

Don Haggerty

Mr. Edison
Remember something about some such man.
Is there any one now supposed to be doing this?

H. A. ALFENGARTEN

Copies to Messrs: C. Edison and Stringfellow.

Heck

[ATTACHMENT]

Mr Thomas Edison

RE

Mr Charles

This bet man in
addition to taking care of Battery
also looks after E.P. Corbys
& Race Records

Probably Masterman was sitting
& waiting for the bet man to pass
him, instead of looking him up

In view of the fact that this
is the first complaint in 6 months
it looks as tho Sheldon has the
pot in hand.

* Note the pouring in first
3 months

Staggerty
J. S. H.

[ATTACHMENT]

PLANT SERVICE DIVISION.

June 5, 1924.

Mr. Haggerty:-

The C & M Division has a belt man whose duties are as follows:-

1. Specify kind of belt to be purchased.
2. Inspect all belt received by the Industries.
3. Supervise the installation, maintenance, and repair of all beltine.
4. Dressen and make over old leather belt.

Owing to the large number of belt drives that we have in the Industries it is impossible for the belt man to personally attend to all the beltine. In the Storage Battery Company where there are over 2000 belts in use, fabric belts 4" and smaller are taken care of by the oilers, under the belt man's supervision. The belt man personally takes care of all leather beltine and all fabric beltine wider than 4".

The belt mentioned by Inspector Eastman drives a high speed blower. This is very hard service, as the belt speed is about 4000 ft. per minute, the center distance of the pulleys is short, and the diameter of the driven pulley is small. These conditions produce considerable slippage which causes excessive wear of the belt. They also tend to cause the steel lacing, which have to be used on this kind of a belt, to wear badly or pull out.

The belt man has recently finished the cleaning, shortening (where necessary), and dressing of all the main drive belts in the Storage Battery Company. He is running a number of belt tests where trouble has been experienced in the past with beltine in the Storage Battery Company, due to temperature, moisture, or atmospheric conditions, so I can not see why the Inspector has not seen him in five months.

* { The belt man has been on the job now for about six months. This is the first complaint that I have had in that time regarding belt maintenance. Furthermore, Mr. Mac Laughan of the Purchasing Department told me that during the first three months that the belt man was on the job, the belt purchases were out in half, representing a saving of about \$1500.00. I have not had a report on the following three months' purchases but I believe it will show an equal saving.

W.M.Sheldon.

W.M.Sheldon

WMS:RBY

**Edison Storage Battery Company Records
Research Reports (1901, 1914-1923)**

This folder contains reports and loose notes pertaining to research conducted for ESBCo. Included are procedural reports, as well as experimental reports made by members of the ESBCo Research Department and by laboratory employees. The documents cover the period August 1914-January 1923, but most are from 1919-1921. At the beginning of the folder are two undated items that are probably from 1901. The selected items include material relating to the reclamation of copper and nickel from different points in the battery production process, reports on the performance of experimental and rejuvenated cells, and suggested improvements to the Chemical Operations Shop. Also included are detailed reports of the Flake Separating Department and the Inspection Department, as well as reports on research done in preparation for increases in factory production and reductions in expense. The authors include ESBCo employees Julius J. Austin, Robert A. Bachman, C. W. Bissell, F. W. Cunningham, E. E. Dougherty, Roy C. Mitchell, Walter H. Patterson, Arthur Pedersen, D. S. Sargent, and Frederick W. Zons.

Approximately 20 percent of the documents have been selected. The selected items consist primarily of notes and reports that were routed to Edison or that otherwise indicate his participation in ESBCo procedures and experiments.

Reports made on a periodic basis can be found in the ESBCo "Operations Reports" folder. Related material can also be found in the ESBCo "Correspondence" folders and in the Notebook Series.

[CA. 1901?]

Battery experiments

file 2 SB 6

Report

on Experiments for an internal circulator for
the Storage Battery.

Began work on this experiment July 2, and completed
my work July 31.

Used various combinations of rubber, gutta serena,
gum dammar, Syrian asphalt, either dissolved
single or in pairs of two in benzol, or else
melted, if it was possible to get good results
melted. The materials to be coated were mica
and burnt asbestos. A few sheets of unburnt
asbestos were coated with Ni , Mg , Fe acetates,
but results were negative.

The best results were obtained with asphalt
in combination with gutta serena dissolved
in benzol & put on burnt asbestos.

A piece of asbestos (burnt) coated with above
solution weighed 2.288 gm. when immersed
in a 25% KOH solution at the end of three months
immersion in this sol. heated to 75°C Fahr. the piece

was removed, dried as well as possible and weighed 2.946 gms. The extra weight was due, I think it to the KOH and water the piece absorbed. It was in practically perfect condition when removed.

Another piece of the same material was immersed a week in 20% KOH. 1st day weight was 1.32 gms. After a week's immersion and drying subsequently, it weighed 1.585 gms.

A piece of burnt asbestos coated with gum dammar and benzol weighed before a week's immersion 1.771 gms. After a week's immersion weighed 1.622. This is a loss of 8.41%. This I believe would render gum dammar absolutely worthless in a storage battery with KOH as electrolyte.

There is another piece of burnt asbestos, whose coating with ^{concentrated} KOH for 7 days immersion. The coating was thinner and ^{the} ~~the~~ ^{permeable} ~~in~~ benzol.

immersion the piece weighed 1.26. After
it weighed 1.638 gms, showing a gain of
378 gms. These two latter, in my opinion
are entirely worthless, and I mentioned them
merely because they withstood for 7 days
the K.O. without disintegrating.

Of the coatings on mica, the only
one appearing worth anything was
Syrian asphalt dissolved in benzol. Its
weight before immersion was .277 gms.

After a week its weight was .280 gms. This
mica after coating can be cut with great
ease and appears ok. It breaks, however,
very easily, so I think it cannot be
used as an internal insulator.

[CA. 1901?]

THOMAS A. EDISON,
PRESIDENT.

W. S. MALLERY,
VICE-PRESIDENT.

FORM NO. 4-1902-24.
J. F. RANDOLPH,
SECRETARY-TREASURER.

EDISON STORAGE BATTERY CO.,

GENERAL OFFICE:
EDISON LABORATORY,
ORANGE, N. J.

TELEPHONE, "211 ORANGE"

WORKS:
GLEN RIDGE, N. J.
SILVER LAKE, N. J.

TELEPHONE, "70 BLOOMFIELD"

GLEN RIDGE, N. J.,

Mr T. A. Edison:
Stoughtonville,
N. J.

Dear Sir:-

I have to report as follows, on examination
of grids from battery of 3000 mile record.

The inside & outside of surface of cups is as good as new.

The " " of surface of cups on Fe grid is also good as new.

The mix which was soft & foamy in the case of
the No. looked O.K. under the microscope, no green
color or green particles could be seen at all.

The iron mix was swelled very little & was very hard.

In the iron pockets the perforations were quite open.

The No. perforations were almost all entirely closed up &
they show the effects of an internal pressure, which
has evidently closed the perforations more than they
were at first. This is shown by the outward bulging
of the sides of the rectangular indentations, thus —



The way they are
in pockets from
3000 mile cell.



The way they
look in new cells.

I think this effect & all swelling effects which we have

2

is caused by internal gas pressure, from over charging & high rate charging, & not to the further hydration of the hi hydrate.

I further believe that if the metal of the pockets was considerably heavier, ^{thus weighed by no weight} the perforations would remain more open, thus making less internal pressure & the pockets would also be more able to resist the pumping which will always be present when fasty hi mix is over charged.

The greatest proof that swell is caused by internal gas pressure, is furnished by the fact that graphite purified so that it contained but 3/10 of one % impurity (chiefly iron & silica) when made into a grid, swelled very considerably both as an Fe & hi.

Here we have a substance which is absolutely inert in the potash, does not hydrate or change at all & yet the swelling goes on just the same. Of course with graphite it should not swell so much as a hi does because the internal pressure should be much less than with the fasty hi mix.

Other facts which point to this as being the chief cause of swell, are:—
More swelling of a hi ^{charged} ~~seen~~ at 500 rate than one at 150 rate.
A hi grid when put in vacuum under potash

swells at once $\frac{20}{1670}$ to $\frac{25}{1700}$ (3)

a graphite grid charged at low rate (50) swells $(\frac{3}{1700})$ scarcely any, while at 2000 rate it swells much $(\frac{20}{1700})$

It might be said, "why don't an iron grid swell more than a hi, as it has twice the volume of gas evolved in it," but this would not be, because rate of flow of hydrogen through a small orifice is about 3 times that of oxygen for the same pressure, and iron mix is more porous & the perforations are generally more open in iron grids than in hi grids.

^{Examination} Examination of the hi mix from 3000 mile cell does not show much more iron & alumina than originally present in the hydrate.

The graphite does not appear to be changed any although in the mix before putting in cell & after long run it is very finely divided.

Have started careful analysis of this hi. & will also do the iron some.

#210 hi - concave dies run at 500 rate, was cut out after 8 runs & left standing charged & examined. The grid was so soft that it could be easily indented with the finger nail. It had swelled 27 cent x 11-mil. diameter. Now if the swell was due to hydrating it would have been hard & firm.

(4)

I am starting experiments to settle this matter of rivell. + Mrs Hays is also going to have some plates made up different ways which we suggested to try + overcome the difficulty without increasing the thickness of steel in cups.

The thing which I want most to try as a maximum experiment, is to have some pockets made ~~too~~ thick + make up a few tests, but there will be considerable delay before this will be done.

If making the pockets of $\frac{4\frac{1}{2}}{1000}$ steel will work all right, it will increase the weight of cell $\frac{1}{2}$ lb. + allow more room for plates.

Am sending you with this some of the later tests which you are specially interested in. We were delayed longer than I expected in getting boilers working O.K.

Respectfully yours -

J W Aythwaite.

P.S. New Studebaker battery is now on charge.

MEADOWS
H. H. Smith

August 6, 1914.

RAB-9-877

Mr. Edison:

Mr. H. H. Smith handed me two positive plates four years old, and said you wanted them to be split in two parts and have contacts tested to see how many Nickel layers are in contact the same as we test regulars every day. I had this attended to at once and the results are as follows:

One plate #1048 Ni.(OH)2+22 Ni.flake.			One plate #1053 Ni.(OH)2+22 Ni.Flake		
Tube #	Lines	Electrical Broken	Tube #	Lines	Electrical broken
1 -	310	22	1 -	307	23
2 -	298	26	2 -	305	25
3 -	304	27	3 -	300	21
4 -	295	24	4 -	304	22
5 -	301	33	5 -	312	24
6 -	315	28	6 -	296	21
7 -	312	24	7 -	309	26
8 -	296	25	8 -	300	24
9 -	302	25	9 -	306	25
10 -	305	29	10 -	311	23
Total	3040	Total 266 broken	Total	3050	Total 234 broken
lines		lines	lines		lines
Average dumps per tube tested 304		Average dumps per tube tested 305			
" " per cent good contacts center 91.25		" " Per cent good contacts center 92.32			
10 Tubes tested 3040 lines		10 tubes tested 3050 lines			
" " " 266 " in center		" " " 234 " in center			
" " " not in contacts		" " " not in contacts			

Note: Four years ago we were dumping flake, then hydrate and tamp, today we dump flake, then hydrate, then flake and tamp, hydrate then flake, then hydrate and tamp, and so on.

At that time we were using the thin round cap at bottom only, now we use the flat caps at both ends.

The three dumps before tamping causes a slight mixture for about a quarter of an inch at the bottom of the tube, whereas, when we were dumping only flake and hydrate, then tamp, we can see more clearly the flake lines.

Kellogg A Buchanan

Tubes in back part of 2nd drawer left
in Mr. Edison's desk

W.H.M.

TRAIGHT COBALT-COED EDISON STORAGE BATTERY COMPANY

RESEARCH DEPARTMENT

T.A.E. EXP. 41E

DATE MAR. 8, 1915

TYPE SHORT CELL No. FE₃, 641E, 642ETEST DISCH. 20°F C

(AUTO STARTING PROPOSITION)

FILLED SOLUTION $\frac{1}{2}$ KOH PLUS GRAMS LiOH

EMPTY

AFTER FILLING ALLOW CELL TO STAND AT LEAST HRS.

RUN	CHARGE		DISCHARGE		REMARKS
	HOURS	AMP.	AMP.	FINAL V.	
1	15	500	100	0.5V	OK
2	ON INDEFINITE				
3	2 Int. 200				
4	2 Int. 200				
5					

FURTHER PROCEDURE:

SHOULD HAVE 7 OR 8 C
REG. FE POCKETS RUN
WITH THE ABOVE FOR
COMPARISON - (Co. with Fe)
FREQUENT TEMP. VOLT
READING.

NOTIFY T.A.E. SIGNED R.C.H.
BAILY

EDISON STORAGE BATTERY COMPANY

RESEARCH DEPARTMENT

T.A.E. EXP. 41E

DATE June 22, 1915

TYPE SHORT CELL No. FE₃-641E, 642ETEST Disch. 20°F C

High Rate

FILLED SOLUTION $\frac{1}{2}$ KOH PLUS GRAMS LiOH

EMPTY

AFTER FILLING ALLOW CELL TO STAND AT LEAST HRS.

RUN	CHARGE		DISCHARGE		REMARKS
	HOURS	AMP.	AMP.	FINAL V.	
1	15	500	100	0.5V	OK
2	10	500	100	0.5V	OK
3	Reported				
4					
5					

FURTHER PROCEDURE:

CR. Temp. 20°F top
R. Reg. Fe Pockets #769E
along with above for comparison
D. 200 - C. 100 -
IV. - 200 - 0.5V - 0.5V

NOTIFY T.A.E. SIGNED R.C.H.

1915

Mitchel - state temp
on 421 also to .9 Volt
etc - want all data
can get at low temp
normal & high etc
+ to 1.8V

Test Notes
#47



So can see what they
will do in cold
weather on a start

Σ



Mitchell



What about trying the experiment
with Cobalt charging at Normal
temp & then discharging
down to Zero temp (about)
You can arrange with
Christensen & bring the cells
over to Chem Lab & he can
bring them down & you can
discharge them from instruments
with you — This is
important as I must know
right off so I can arrange
for Cobalt. Use best Cobalt cells

Edison



Mitchell -

Did you make test
as asked in previous
note on test (Cold) Cobalt
at as low temperature
as you can get, I mean during
Did you get note -

Fe Rec 10/10/18
6X1-2-6

S



Mitchell



Wish you would try some
of these Cobalt Cells at as
low temp as you can get
on Discharge,

Christensen at Chemical
room will give you
points — Want to
see what point they
go bad like Iron
Day 421 E

FE Toomey
Oct 12 1906

Read Volt. .9 Volt + 50

Mr. R. A. BACHMAN:

*me - dead anodes should be changed more -
Village - Current will cost more -
There are other*

Our present method of handling copper anodes seems capable of improvement due to the fact that we are buying copper anodes at top notch prices and selling our copper at a loss. Our process should be so conducted that we can operate with a certain stock of copper without buying or selling. Lead anodes afford a means of reducing our purchases and sale of copper to a minimum. The following comparisons will show the advantage of doing this.

- Observations on Copper Anodes
- 1.- Copper taken out by drums in form of solution is roughly equal to copper plated on drums. *as solution*
 - 2.- Rate at which any ingredient is removed is proportional to its concentration in the bath.
 - 3.- Copper anodes dissolve at a faster rate than copper is plated on drums.
 - 4.- 16,000 lbs. of copper anodes are used in plating 11,000 lbs. of copper.
 - 5.- This excess rate is sufficient to operate without the addition of copper sulphate.

- Observations on Lead Anodes
- 1.- Frequent analyses show that no lead is plated with the copper.
 - 2.- Lead anodes are practically permanent.
 - 3.- Sulphuric acid and oxygen is generated at anode.
 - 4.- The sulphuric acid reaches an equilibrium at 80 grams per liter
 - 5.- Voltage with lead anodes 55, with copper anodes 22.

- Disadvantages of Lead Anodes
- 1.- The oxygen causes an unpleasant spray from the copper bath.
- Remedy-- A few handfuls of wooden chips or soft rubber gaskets in the bath.
- 2.- If copper is not plated immediately upon entering the copper bath a "copper burn" is produced.
- Remedy-- Wash drums with concentrated hydrochloric acid.

- Results with Lead Anodes
- 1.- Normal copper contents of sheets
 - 2.- Normal time in separation
 - 3.- Normal amount of "heavies".
 - 4.- Reduced tendency to speck.

- Variations
- 1.- In order to prevent the scraping of the chips on the loose copper cement, wash the drums with a solution of sodium sulphide and go directly into the copper plating bath, eliminating both the iron plating and the copper dip; or plate with iron and go into the copper plating bath. Both these methods give better results than our present way. This will also allow us to put brushes on the copper bath if necessary.
 - 2.- In order to cut down our losses of copper as solution, run the baths at 10 grams of copper per liter instead of 80 grams per liter. Satisfactory results are obtained down to 5 grams per liter.

Relative Cost of Operation 17 Cranes For one Week

	Present Day		No. Copper Sulphate		Lead Anodes	
	Lbs.	Price Cost	Lbs.	Price Cost	Lbs.	Price Cost
Copper Anodes Consumed	1600	.3543 \$567.20	1600	.3543 \$567.20	None	-- --
Sulphuric Acid	2000	.03 60.00	2000	.03 60.00	"	-- --
Copper Sulphate	3200	.0432 138.56	None	-- --	5100	.0432 220.82
" Bought					500	.10 50.00
Cost of Current	1028 KW	.015 15.27	1028 KW	.015 15.27	1496	.015 22.44

Gross Cost	781.13	642.57	293.27
------------	--------	--------	--------

Salable Material Produced

Copper Cement	350	.13 45.50	350	.13 45.50	Used for	Cop.sul
Cuprous Chloride	500	.04 20.00	500	.04 20.00	500	.04 20.00
Copper Sulphate	None Available		5100	.07 357.00	--	-- 00.00
Remainings etc.	100	.18 18.00	100	.18 18.00	100	.18 18.00

Gross Cost	83.50	440.50	28.00
------------	-------	--------	-------

making
Cost of Copper Sulphate \$ 5100 lbs. @ .0432 = 220.82
Net cost \$219.67

Gross Cost	697.63	642.57	292.27
Salable	83.50	219.67	28.00
Net cost	697.63	422.90	265.27

Remarks-- The above estimate is based on 100% efficiency throughout. It will be impossible to obtain this until our apparatus which is ordered is installed. Seven cents a pound for our copper sulphate is an estimated price.

Investment

- Required-- 1. About \$160.00 per crane for lead anodes at 7¢ per lb for lead.
2. A tank for dissolving copper cement

Profits--

1. By not adding copper sulphate to our copper anode baths we save \$138.56 per week.
2. By using lead anodes we save \$306.19 per week compared with the best operation possible with our present methods.
4-22-94 138.56 ~~\$221.55~~ - \$255.27 = \$306.19. This reduces the cost of flake about 14¢ per pound and saves sixteen thousand Dollars a year.
3. By eliminating the iron baths and copper dip we save about \$1000 a year in materials, get better results and cut down the time in starting and stripping.

Recommendations--

1. Stop putting the copper sulphate in our copper anode baths, until we get the lead anodes.
2. Use lead anodes instead of copper anodes.
3. Eliminate the iron plating and copper dip baths.

ARTHUR PEDERSEN.

Arthur Pedersen

CC- to Messrs. Mudd-Monahan-Weed-

RECEIVED
COMMUNICATIONS SECTION
JAN 10 1964
AIR MAIL
JAN 10 1964
JAN 10 1964

1/27/14

7th - 7th Mind Experiment

Mr Edison -

Requested 3rd

In order to see if I could
use 1st Lignum on a new batch of
Mud, to enrich it, and cut out cancer
tissues as much as possible, I tried
the following:-

Tried this in the cold also, to
see if we could cut out steam-coils.

Added some 1st Lignum to a fresh
batch of Mud, with just enough
H₂O to give acid reaction

Result:-

	Before	After
Sp. Gr.	1.212	1.3356
Wt. Sample Lbs.	59.432	101.502

You see it resulted in a
lignum twice as rich in Nickel

(2)

The slurry seemed very
sluggish, as compared with the
original experiment, but
settled clear over night.

The solution, in addition
to the Nickel, showed quite a
large quantity of Iron, also
free acid.

I believe if I had treated
the mixture, that it would
not only have settled more
readily, but would have
shown higher in Nickel,
and lower in Iron and free
acid.

If we allow more time for
settling, we can run this first
lignum over until it is saturated.

Edgely

*Let - These are the samples
we have collected -*

CARBON SODA

May 15th, 1919.

Analysis

Agents

<i>Here</i>	Columbia Chemical Co. Barberton, Ohio.	Sodium Hydrate Sodium Carbonate Sodium Chloride Sodium Sulphate Actual Alkali (Na2O) Degrees Alkali	97.34% 1.69% .84% .24% 75.39% 78.85%	Isaac Winkler & Bro. Cincinnati, O.
<i>Here</i>	Mathieson Alkali Works Saltville, Va.	NaOH Na2CO3 NaCl Na2O	96.71% 1.69 1.02 75.95	Arnold Hoffman & Co. New York.
<i>Here</i>	Solvay Process Co. Detroit, Mich.	NaOH Na2CO3 NaCl Na2SO4 Copper Iron	97.12% 1.00 .93 .75 .0015 .0004	Wing & Evans, New York.
<i>Here</i>	Diamond Alkali Co. Pittsburgh, Pa.	NaOH Na2CO3 NaCl Na2SO4 Moisture Na2O	96.48% 2.12 .67 .33 .40 76.01	-----
<i>Here</i>	Hooker Electrochemical Co. 40 Wall St. New York.	NaOH Na2CO3 NaCl Na2SO4 S as Na2S Fe2O3 SiO2	96.69% .85 2.21 .243 .0005 .0015 .0005	-----
<i>Here</i>	Michigan Alkali Co. Wyandotte, Mich.	NaOH Na2CO3 NaCl Na2SO4 Actual Alkali (Na2O)	97.24% 1.40 .70 .26 75.18	Edward Hill's Son & Co. New York.
<i>Here</i>	Niagara Alkali Co. Niagara Falls, N.Y.	NaOH Na2CO3 NaCl Na2SO4 Na2SiO3 Fe2O3 Al2O3 CaO MgO	95.54% 1.50 2.77 .11 .16 Trace " " " "	J. L. & D. S. Riker, New York.
	Pennsylvania Salt Mfg. Co. Philadelphia, Pa.	NaOH Na2CO3 NaCl Na2SO4 SiO2 Fe2O3 CaO MgO H2O (by difference) Na2O	95.65 1.45 2.30 .10 .05 .02 .001 Trace .30 75.	-----
<i>Can not get</i>	Castner Electrolytic Alkali Co. (no analysis received)			

*Analysis of
samples to be
sent to analyst*

Report on ^{file this} ^{on alternative read} ^{November 7, 1919} ^{to make} ^{Curve G} ^{Tests}

Iron.

Rate - Charge - 400 milliamperes for 15 hours.

Discharge - 300 milliamperes to 1.0 volt

Picket.

Run 9

8077

825 milliamperes - hours

8078

865

8079

840

8080

765

Nickel Hydrate

Charge - 225 milliamperes for 6 1/2 hours

Discharge - 225 milliamperes to 1.0 volt

Takes

Run 18

1505

On hot runs.

1506

W.H. Peterson

1919 "Rating, Storage"

Nov 8/19

Mr. H. A. Givens: What is necessary
to handle 1000 to 1500 lbs daily
of stuff as it comes from
Dunbar Co. -
Dunbar Co. -
Report on: "Experiment to Recover Nickel & Copper
from Refractory Waste, etc."

Analysis:- (West Davis)

		<u>Water Sol.</u>		<u>Acid Sol.</u>	<u>Total</u>
Moisture	6.45%	—		—	—
Total Copper (Cu)	0.16%	Trace		0.16%	Trace
" Nickel (Ni)	1.38%	1.308%		6.57%	Trace
" Fe (Fe)	7.51%	Trace		7.51%	Trace
Acid Total.	0.64%				
* Undetermined	87.81%	by difference			
Total	100.00%				

* Note This is principally Cu Sol

Experiment.

Tried at first to break up material
into a slurry with both cold and boiling water,
(100 grams to 200 cc water). — Break up & ~~but~~
did not settle. — Then tried
again, using (100 grams material 200 cc water,
boiled, and added H₂SO₄ until Ni & Fe C₂
test-paper showed trace in solution. Settled
readily.

Comparing the two test-marks, observed
the following: — Without Acid + proportion

(2)

(Contin.)

100 Material + 200 Water, boiled, allowed to stand 1 hr., Result: Lumps broke up readily, but had not settled perceptibly in 1 hr., sent $\frac{1}{2}$ inch foam on top and would not break up, Shiny, light-brown and shiny. With Acid:— Operation same as preceding, but added H_2SO_4 till No. 2, showed Fe in solution. Result: After 25 min. settling had taken place to the extent of $2\frac{1}{4}$ " in a total of $3\frac{1}{4}$ " of sol. or 69.23%, no foam on top, color a darker brown than preceding and more granular.

I also dried some of the material and dried, leaching with hot water, with and without H_2SO_4 . Results same about same as with wet material. From mill notes from analysis, that only a comparatively small proportion of the talc is water sol. — Adding H_2SO_4 to the dried material gives about same result as adding it to wet, so drying may be dispensed with.

I had one experiment as it was almost finished, and by the time the one reported here was started, the material had dried out somewhat

(3)
(Continued)

as may be noticed in comparing the results obtained, with the results of the original material.

Details

Take 100 grms. Material (wet)
{ 200 cc. Water

Water to boiling — add H_2SO_4 until K_2CO_3 remains undissolved — Stirred until all lumps have been broken up — Added 100 cc extra water to hasten settling.

Sulph. Acid added:

17.488 gram (88.9%) = 14.93 gram act. H_2SO_4

Before filtering, Volume = 350 cc

Stirred — Decanted into Filter —

Washed with 20 cc Hot water.

1st Filtrate

Vol. = 290 cc

Sp Gr = 1.113 (Room temp.)

Grms. per liter

Ni 1- 31.857

Cu 1- 5.607

Zn 1- 1.225

Washed Precipitate until I judged all soluble salts had been removed

(4)
(Continued)

<u>Washings</u>	<u>Vol.</u>	<u>1.00 cc</u>	<u>Grams per Liter</u>
Ni :-			0.988
Cu :-			0.0153
Fe :-			0.0438

Note This can be used over again for washings, diluting etc.

Press Cake (Waste)

Amx :-	22.951	grams. Wet
Mn x :-	22.34	%
Ni :-	0.106	%
Cu :-	0.144	%
Fe :-	11.72	%

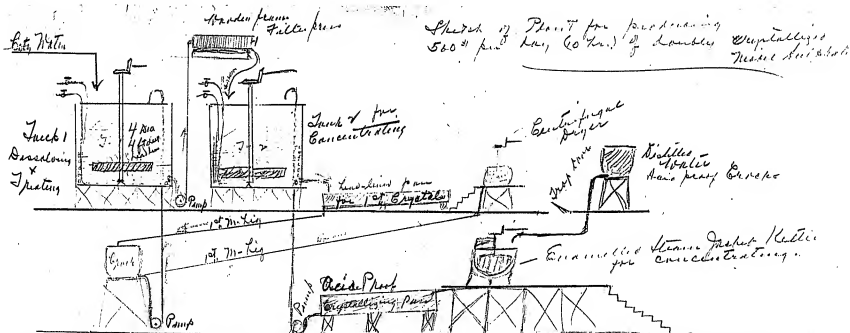
Wet Basis

As you can see, practically all of the Nickel and Copper is recovered by this method, and pressed as follows

	<u>1st Liquor</u>	<u>Washings</u>	<u>Waste Cake</u>
Calculated to			
lbs. per Ton			
of Original Material			
above calc -			
created to			
per centage -			
Ni	184.76 #	2.76 #	0.49 #
Cu	32.74 "	0.04 "	0.66 "
Fe	6.70 "	0.07 "	53.80 "
Ni	98.27 %	1.46 %	0.27 %
Cu	97.90 "	1.19 "	0.91 "
Fe	11.06 "	0.12 "	88.82 "

Signs :-

E. S. Hughes



Tank #1 Cylindrical, lead-lined wooden tank 5 1/2' dia. x 7' deep - For dissolving & filtering Cryst. Nils.
fitted with hand - stirrer and 2 paddles

Tank #2 Cylindrical of above, to be used for Concentration 1st time.

Lead-lined Crystallizing Pan - Wooden frame lead-lined 5' x 7' x 4'

Centrifugal Drums - Rubber and exposed parts should be hand-rubber or enamelled.
Place wet crystals in bags before centrifuging

Enamelled Steam Jacketed Kettle for Concentration - Panes is able to handle 4 charges of 120 gals. ea. in 10 hrs.

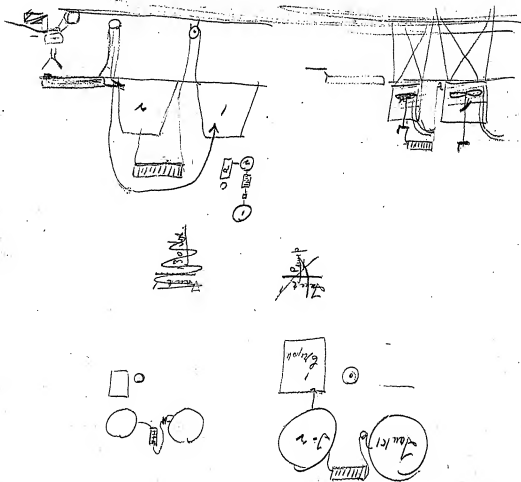
Enamelled Tank For 2nd Crystallization, fitted with hole at bottom for draining

Plan for Purifying Water by 2 Capitalization

Distilling Tank.

Dimensions:—

To be hand-driven and to be furnished with
lead steam coils, also paddles



[ON BACK OF PRECEDING PAGE]

$$\begin{aligned} \text{Miles } 640 &= 766 \\ &= 2705 \text{ } \# \quad 0.0275 \text{ on ft. in. sec.} \end{aligned}$$

$$2400 \text{ } \# = 55.08 \text{ on ft. in. sec.}$$

Just before following 1675.00 m 118.7 each per 24.5 m

$$\begin{array}{r} 50. \\ 50. \\ \hline 24.5 \\ 24.5 \\ \hline 30.0 \\ 30.0 \\ \hline 20.00 \\ 1010000 \end{array}$$

$$\begin{array}{r} 490 \overline{) 380.0} \quad (79 \\ 3050 \\ \hline 3700 \end{array}$$

$$\begin{array}{r} 1675 \\ 780 \\ \hline 895 \\ 113.7 \\ 57.9 \\ 780 \\ \hline 57.915 \\ 7850 \\ 28 \\ \hline 39770 \\ 15708 \\ \hline 196350 \\ 117.75 \end{array}$$

$$\begin{array}{r} 600 \\ 600 \\ \hline 1200 \end{array}$$

$$\begin{array}{r} 118V \\ 65 \\ 30 \\ \hline 35 \\ 120 \\ 245 \end{array}$$

$$\begin{array}{r} 7856 \\ 3025 \\ \hline 275 \\ 275 \\ \hline 3025 \\ 238650 \\ 2376400 \\ 15856 \end{array}$$

$$\begin{array}{r} 5 \\ 35 \\ 35 \\ \hline 4 \\ 100 \end{array}$$

$$\begin{array}{r} 54795 \\ 3 \\ \hline 105 \end{array}$$

1)

Preparation to produce SO_2 for use
(10 Tons.)

Of Double concentrated H_2SO_4

1st Operation

Distillation in City Water 2000⁺ Cents.
 H_2SO_4 & H_2O . — Heat by means of
steam coils to increase the heat
pressure. — SO_2 should be 1.317 @ 88°C. —
Add enough BaO to provide for the H_2SO_4 ,
neutralize the free acid by means of
molar Hydrochloric Acid, and if any
Cu or other H.A. metals are present, add
enough BaS sol. to remove them.

Tank should be cylindrical, tapered,
lead lined, and to be provided with
lead steam coils, and stirrer.

Dimensions 5 ft. dia x 7 ft. deep.

2000⁺ Cents. H_2SO_4 & H_2O = 55.0 Cu ft.
and made into solution of 1.312 sp. gr. @ 88°C
= 119.5 cu ft.

which will be about 5 feet depth in the
Tank.

2nd Operation

Filtration. This could be
carried out readily in a filter tank,
provided with false bottom, gravel, sand
and wood pulp or sawdust.

3rd Operation

Distillation 2' x 3' x 7' deep large tank
Concentration to 1.433 @ 90°C
Although a reduction of H_2SO_4 from 119.5 cu ft.
x

500th Bentley x Collings Nelson
(Jan. 10, 1901)

Tank #1 Round - wooden - Lead lined, lead
118. Enft. steam coil for heating and fiddle.
5' dia. by 7' deep
2000⁺ Lbs. water, with 10% water to
at. of 130⁺ lbs. @ 81⁺ °C., which will
fill to 5' depth.

Tank #2 Same as Tank #1, but for gas -
5' dia. Condensing to 130⁺ lbs. @ 90⁺ °C.
Filler press Small wooden frame press, between Tanks
#1 & #2.

Cryostat Lead lined, - wooden base, about
13' x 7' x 4' - 1200 lbs.
1st M. Leg. 1010⁺
1st M. Leg. = 60 lbs. @ 130⁺ lbs.
Pressure at Condensing in tank, then to
Enamelled steam Jacketed Kettle.

1st M. Leg. Tank to Tank #1.
Enamelled Small type, as per parts to be received
with Kettle as described.

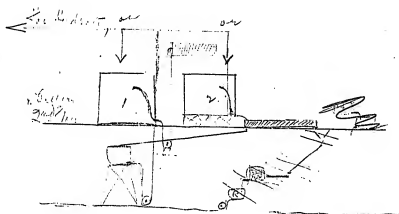
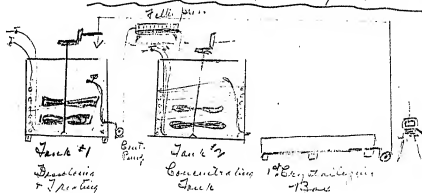
Enamelled Kettle Exp. 58. Enft. in 4 lots
as 10' Enft. = 120 lbs. for 20 lbs.

2nd Cryostat Box Enamelled Rectangular Box, 20 lbs. gal.
Exp. 58. ~~to be replaced~~
shows signs of rust by hand.

2 Cryostat at. 700⁺ Lbs.
2nd M. Leg. at. 26 on ft. Tank to Tank #1

[ATTACHMENT]

Jan. 17/20
Preparation of double crystals of
and removal impurities from Camille
Mixed Sulphate.
Capacity 500⁰⁰ per day (10 hrs.)



$$\begin{array}{r}
 75 \\
 7600 \\
 \hline
 100000 \\
 75 \\
 \hline
 7500 \\
 100000 \\
 \hline
 107500 \\
 490 \overline{) 3650} \quad (7 \\
 \hline
 2030 \\
 \hline
 2700
 \end{array}$$

$$\begin{array}{r}
 634 \\
 140 \\
 \hline
 4178 \\
 3340 \\
 \hline
 838 \\
 14 \overline{) 1.071}
 \end{array}$$

$$\begin{array}{r}
 505 \overline{) 3800} \quad (75 \\
 \hline
 3855 \\
 \hline
 545 \\
 1675 \overline{) 1115} \quad 365 \\
 \hline
 365 \\
 \hline
 750 \\
 350 \\
 \hline
 40070 \\
 35000 \\
 \hline
 5070 \quad (\sqrt{6}
 \end{array}$$

$$1645$$

Mr. W. J. Harris

Copy

File

November, 10, 1919.

Report of Special Tests

Charge - 700 milliamperes per 15 hours
1st charge 300 milliamperes at 1.9 volt

Pocket	Time 10	Time 11
8077	125 milliamperes hours	890 milliamperes hours
8078	865	815
8079	835	890
8080	745	800

+ 24⁰⁰/₈₀

Tube Hydrolysis

<i>Charge</i> - 225 milliamperes	6 hr hours
<i>Coolings</i> - 225 milliamperes	1.9 V. and

Short circuit

Tube

1505 One hot runs

1506

Water 71 bottles used

Mr. T. A. Edison,
Mr. J. V. Miller,
Mr. W. J. O'Dair:

November 17, 1919

Reference: Request for Test # 115, Electrical Test # 933.

Subject: Mr. Edison's experiment - Hydrogen displaced by Co_2 gas.
mercury - Dougherty # 2 - hand assembled.
5 green pockets 8077, 8078, 8079, 8080. *See for Zn* → Weight per pocket
Fe Mix (special) Nickels used, size of known capacity. 8077 - 8.05 Grams
Electrolyte 15% NaOH plus 11.2 grams LiOH per liter. 8079 - 8.05 Grams
8080 - 8.95 Grams

M I L L I A M P E R E H O U R C A P A C I T Y

Run No.	Charge Hrs	Discharge Rate	8077		8078		8079		8080	
			I.V.	.5V.	I.V.	.5V.	I.V.	.5V.	I.V.	.5V.
1 x	15	500	400	747	747	740	747			
2	15	400	300	300	300	300	300			
3	"	"	"	265	265	260	260			
4	"	"	750	400	387	400	337			
5	"	"	"	362	362	362	375			
6	"	"	"	487 - 562	612	687	475 - 575	400 - 512		
7	"	"	800	840	855	835	800			
8	"	"	"	745 - 835	775	860	745 - 835	700 - 805		
9	"	"	"	825	865	840	765			
10	"	"	"	825	865	835	745			
11	"	"	"	800	885	890	800			
12	"	"	750	850	900	862	512			
13	"	"	"	850	900	862	537			
14	"	"	"	682 - 1262	975	1537	875 - 1287	550 - 1137		
15	"	"	300	1035	1220	1040	900			
16	"	"	"	1285 - 1615	1460	1750	1310 - 1650	1185 - 1550		

x Charged at 500 by error.

Walter H. Patterson
Walter H. Patterson.

Mr. Cowan:

The heavy discharge tests we have been running for you will be off in a few days.

On the 10 ampere tests the batteries tested from rated times at 336 ampere hours, .26 volts.

On the 7 ampere tests they tested from the same times at 372 ampere hours, .315 volts.

The 5 ampere tests have run 310 ampere hours, and are still going, with the voltage at .465.

W. Charny 12/2/19

Send Curves when finished

Σ

Mr. Cowan:

Two copies of Curves attached.

W. Charny 12/2/19

file

Jan. 23, 1920

Mr Edison.

The soda electrolyte used in cells with plates A, B, C and D was made of 15% NaOH straight which had a specific gravity of 1.163 at 60°F and 22.5 grams L.OH (100%) added dry.

The volume of these cells is 1000 cubic centimeters. This makes the solution about 15% NaOH + 22.5 grams L.OH per liter.

The volume of an A-4 cell is 1410 cubic centimeters. There is 90 gms of 100% L.OH per cell. The solution is 15% NaOH + 50 gms L.OH per liter.

The amount of lithia for the special plates is based on $\frac{1}{4}$ the amount for an A-4 cell. The amount

The solution for plate in these cells
is greatly in excess of that for an
D-4.

Volume of special cell 1000 cubic centi-
meters.

Lithia per plate 22.5 gms 100%

Lithia per liter 22.5 gms.

The solution has not been
changed. It will be changed as
soon as chemical analysis is
made to determine proper amount
of lithium should.

Wm. H. Johnson



[ATTACHMENT]

file		Ask Patterson if he has changed 21, 1920. Decision as to whether in a 13 C 9 D plates to bring them up to right grade	
22.	also if these plates had originals Charge requires manuscript of	also if these plates had originals Charge requires manuscript of	
23.	within in proportion as	within in proportion as	
24.	plates - say I would like	plates - say I would like	
25.	there at 1500 p.m.	there at 1500 p.m.	
26.	" to be told how much what	" to be told how much what	
27.	" was amount of original 10.00	" was amount of original 10.00	
28.	" in Cubic Centimeter of amount	" in Cubic Centimeter of amount	
29.	of 1000 in it per liter	of 1000 in it per liter	
30.	1000	1000	
31.	13.1	13.1	
32.	11.3	11.3	
33.	12.5	12.5	
34.	3rd Plate, average	3rd Plate, average	
35.			
36.			
37.			
38.			
39.			
40.			
41.			
42.			
43.			
44.			
45.			
46.			
47.			
48.			
49.			
50.			
51.			
52.			
53.			
54.			
55.			
56.			
57.			
58.			
59.			
60.			
61.			
62.			
63.			
64.			
65.			
66.			
67.			
68.			
69.			
70.			
71.			
72.			
73.			
74.			
75.			
76.			
77.			
78.			
79.			
80.			
81.			
82.			
83.			
84.			
85.			
86.			
87.			
88.			
89.			
90.			
91.			
92.			
93.			
94.			
95.			
96.			
97.			
98.			
99.			
100.			

Walter J. Patterson

Jan 31, 1930

Report on Experimental Setup

Test - Sprague Hydraulic Motor, frame model made in form of
 tube and motor, of sprague motor, also the wiring
 of the motor.

Rate - charge - 15 hours at 900 milliamperes.

1000 - 1000 milliamperes at 1500.

Sub 12

Rev. 170

171

172

1000

1000

1000

1000

1000

1000

1000

1000

Cells are 1000, 500, 1000.



Walter H. Ransom

This should have the Edison Number
 on - Edison # 2 # 3 & # 4
 were sent away

Σ

Feb. 3, 1920

Report on *Epinephrine* tubes

Tubes #1505 and #1506 was

received Oct. 31, 1919. It was

marked "Edison special N. J."

The hydrate was received from

"Edison #2, #3 & #4" and

has no distinctive numbers.

Paterson *Walter H. Edison*

Mark it

Edison

no 1
705

Please return to
W. H. Mead & Co.

Patterson - I cannot identify Mar 23 1920
 (i.e., either either are Edison # or Moore #)

which

Test - Period of average film meter with of date - Mar 23
 Date - charge - 15 hours 20 min. in position. Mr. Edison
 discharge - 500 mil. amp. over to 5000. there are the
 reports of memory
 experiments -
 measurement

Sutter	Run	1	2	3
1547	550 M.A.H.	1157 M.A.H.	1213 M.A.H.	
1548	563	1160	1220	
	144	15	16	
1547	1150 M.A.H.	1133 M.A.H.	1010	1223 M.A.H.
1549	1217	1197	1183	1200

Patent 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Now I have lost the Moore's Report & can tell nothing
 about this - Moore Moore describes what
 his number is & under it photo I recall of
 tests by Patterson

June 30/20

Progress Report on Spodumene

Mr. Edison - I am very glad to report the following very encouraging results obtained with only theoretical quantity of Ca(OH)_2 and after only 5 hours treatment at about 70°C with constant stirring. The experiments reported upon are Expts 18-19-20.

Up to these experiments work was of a preliminary nature to study effect of Ca(OH)_2 only, and what type products were formed.

Notices that after comparatively short time that although there was hardly any water soluble Lithia, still treatment with HCl gave high extraction of both Lithia and Aluminum.

This looked as though the Meta Silicate had been broken down into an intermediate compound first of all, probably an artificial Lithia zeolite.

If this zeolite forms just as readily in the ground as in the fused material, it would make a much longer preparation of the run of mill available for the final extraction of LiOH by means of Ca(OH)_2 .

A great deal of time has been used up in weighing the samples quantitatively for Lithia which as you know is a tedious and lengthy operation and also checking these results by Spectroscopic. There were 3 assays for each sample.

(2)

or 18 in all. — But the results obtained justified the time taken.

I believe that, when we have once obtained the data relative to the change from Meta-Silicate of Lithia & Aluminia, to the Silico-Aluminates of Lithia, we can almost determine how long it will take to convert the Lithia to water sol. Hydroxide, and also what maximum size we may safely use.

Exp. No.	18	19	20
Specimen Size No.	1	2	3
Actual Size	(Lithia) $\frac{1}{1000000}$ inch	$\frac{123}{1000000}$ inch	$\frac{1}{1000000}$ inch
% Gies from Mill	17.6%	13.5%	31.75%
Amount Spd.	10.0 grams	10.0 gram	100 gram
Milk of Lime	35.0 lbs	35.0 lbs	35 lbs
= O ₂	5.293 grams	5.293 gram	5.293
H ₂ O	50 lbs	10 lbs	35 lbs.
NaOH	—	—	0.4 gram

Treated as nearly as possible, in same manner, as 5 lbs in covers agitator at temp. of 70°C with constant slow stirring. Material filtered and washed easily.

After washing out apparatus, the slurry was led onto filter and washed with water.

All of filtrate was evaporated and Lithia content determined and

(3)

constituted the water sol. — Cake was then treated with HCl until acid to methyl orange. Did not filter so well, and filtrate was cloudy. This constituted HCl sol. and gave very decided reactions for Lithium & Aluminum. — The insol. was dried and weighed and slightly & fairly assayed for Lithium.

Obtained following results.

Exp. No	18	19	20
Original Li ₂ O	3.34%	4.46%	2.49%
Water sol "	0.15%	0.10%	0.09%
Fusible "	0.45%	0.50%	1.94%
HCl sol " (by diff.)	2.77%	3.86%	.96%

	Yields		
Orig. Li ₂ O	150.00%	10000%	10000%
Water sol "	5.53	2.24	3.61
HCl " "	81.42	86.55	77.91
Fusible "	13.55	11.21	18.48

The water-sol in sol then examined. Shaved 0.04% in sol.

The amount of lime used was therefore paid. Must be measured in subsequent work.

EE Hughes

To: Mr. F. W. Cunningham, Mgr. Engineering Dept.

From: F. W. Zona.

Date: July 24th, 1920.

Increasing Production by
Decreasing the Present Number of Operations and
Improving Mechanical Conditions, in
The Purification of Nickel Sulphate Solution.

It would appear that some of the steps in our purification of this solution for the crane room can be shortened while other steps in the process appear to be superfluous.

The following suggestions are based on work done at Silver Lake and on several weeks consideration of the operation here and are submitted with the hope that it will result in greater economy in both time and space required for increased production.

It was not intended to forward this report till later but your readiness to discuss the matter once made an earlier report desirable, and if you should chance to consider the matter before August 24, it is requested that no action be taken before Mr. Ulrich returns.

A Few Criticisms of the Present Method.

Limited Capacity,
Cu Cement Tanks.

In general there are difficulties it seems, in the mechanical side of the operations. In the copper purification step for example, the cement is allowed to remain in the tanks for a considerable time, as must not be siphoned too closely, the tanks in some cases have only 1/3 their normal capacity. One large tank could easily do the work of the four small units, in little more time than is necessary to operate one present unit.

Conical Bottoms
and Bottom Outlets.

A big advantage would be gained by having tanks with conical bottoms with an outlet so as to facilitate emptying them. This outlet could be connected to a filter press and the tank completely emptied after each precipitation. It is not easy nor economical to shovel out the cement. More capacity in these tanks would result in better floor conditions.

Undesirable Siphons.

After the removal of copper the supernatant solution is siphoned to a storage tank where it settles for 4 hrs. to catch carried over copper, and then siphoned to the iron purification tank. Even with this precaution some copper usually reaches this tank, and on acidifying some of the fine cement dissolves, in other words an operation requiring an aggregate of 8 hrs. is partially spoiled so that an additional step has to be taken as a rule to again remove copper. Attention was called to this point on July 19th and after discussing several means of improving the condition Mr. Ulrich decided upon a filter press which will remove this trouble. Its speedy acquisition is urgent.

Chlorine Removal. Just why precautions are taken to boil the nickel sulphate, sometimes for several hours to 'free' it of chlorine, when at a later stage in the electrolysis it has been found desirable to add some chlorides to the bath either as acid or salt, is not clear to the writer.

Iron Mud. It is of interest to know that in the removal of iron the mud sometimes (June) contains eight times as much nickel as the iron which is removed. These analyses also show the copper that had to be removed a second time.

SSa.	SpO	Si.	CU.	Zn.	SSa.
6-17-20.	-	25%	1.6%	3.2%	7
"	52.5%	12	.8	1.54	3.4

This was undoubtedly due to carelessness on the part of men who were more interested in striking than in watching their operations. The present excellent co-operation, enthusiasm and detailed supervision given by the chemical and operating departments will undoubtedly give as good or better results than are obtained in a similar operation at Silver Lake.

The Suggested Methods.

Three (3) methods are herewith outlined. While there is an appreciable saving in cost in each case, this was not the sole consideration. The main issue is greater efficiency in production, so as to relieve a sort of "from hand to mouth" state of affairs.

The methods although tried in the laboratory are not necessarily complete. Definite conclusions can only be drawn from a practical test.

An attempt has been made to introduce a radical change in the present basic method. In each case is given an approximate estimate of the saving in labor, time of flow sheet, saving of materials, and percent increase in production.

For convenience an outline of the present method is also given.

Suggested Method No. 1.

In this scheme the process is the same up to step #5 (see present method) since there is usually some copper present (as stated above) from steps #6, #7, & #8, so that at present soda ash is added (step #13) it would appear that steps #6, #7, and #8 are not necessary and have been eliminated in this method. As the solution is acid in step #4, step #9 is unnecessary. Also in step #12 soda ash being less expensive than caustic soda can be substituted resulting in the elimination of step #12.

The time in labor saved in this method is about as follows:-

Step #5	2 1/3 hr.	8 (av. no. tanks per day)	5 1/3
" #6	1 1/2 "	(2 men) . 8 "	8
" #7	4 "	" "	(4)
" #8	5 1/4 "	" (2 men - 2 tanks)	2
" #12	1 1/2 "	" "	2

If tanks are changed to double their capacity,

Step #3	1 1/2 hr	(4 tanks)	6 hrs
" #4	3 2/3 "	(4 ")	14 2/3

This represents a total saving in labor of 39 hrs per day and at 62 1/2¢ is equivalent to \$24.37 per day or \$633.75 per month. If the present tanks are not changed the saving will be \$297.37

1200 lbs. Not for use.
 are used at present!!
 1200 lbs. Not for use.

3-

per month.

By the present method the flow sheet time is about 14 hrs. 25 min. the saving in flow sheet time is about 6 hrs., 10 min. or 42.8 %.

As the present production (Cost Dept record) is 1885 gals. per day (@ 1.25 lbs H₂SO₄ per gal) this can be increased to 2901 gals. (59%) in 20 hrs. or 3124.4 gals (71.2 %) in 24 hrs. This is based on the saving of 6 hrs 10 min in the present time of 14 hrs 25 min.

The saving in material is not so marked being,-

80 lbs. (2 tanks)	sulphuric acid		\$.72
64 " "	NaOH	@ 5¢	\$ 3.20
	Saving per day		3.92
	" " month		101.04

Therefore without changing the present equipment the saving can be summarized as follows,-

Time (Labor)	39 hrs. per day.
Time (Flow sheet)	6 hrs 10 min. per day.
Production increase (20)	59 % (2901 gals)
Labor cost @ 62 1/2 ¢	\$ 297.37 per month
Material cost:	101.40 "
Steam etc. @ 1.00 per hr.	160.33 " "

NO OVERHEAD CHARGES.

Suggested Method No. 2.

In this method there is no change up to Step No 6, (see present method).

In spite of a well defined prejudice which we harbor against using bleach in a neutralized nickel sulphate solution this can be done and is a practice at other places. Therefore after removal of copper the neutralized solution is at once oxidized with bleach thus eliminating steps #8, #7 and #9. After oxidation the solution is boiled and filtered, without the need for steps #12 and #13.

In this method the saving in labor is about as follows,-

Step #6	1 1/2 hr 2 men. 2 tanks (av. per day)	8 hrs.
" #7	" " " " "	(4)
" #9	3/4 " 2 men 2 tanks)	3
" #12	1/2 " " " "	2
" #13	" " " " "	

And again if Cement tanks are slightly changed to double the production-capacity,-

Step #2	1 1/2 hrs (4 tanks)	6 hrs.
Step #4	3 2/3 " " "	14 2/3 hrs

At 62 1/2 ¢ (no overhead etc.) this represents \$ 547.04 per month. Without the changed tanks " " \$ 211.25 " " The saving in flow sheet time (5 3/4 hrs) (39.88%) is 55.2 % in 20 hrs or 66.24% in 24 hrs. (# shifts)

Saving in material is the same as in Method # 1. i.e. \$101.40

Summarizing we get the following savings,-

Time (labor) present tanks	13 hrs. per day.
Time " outlet tanks	33 1/3 " "
Time (Flow sheet)	5 3/4 " "
Production increase to	2833.4 gals.
" " "	3033. "
" " "	297.37 per mo.
" " "	101.40 " "
" " "	144.50 " "

Labor cost (20 hrs.)

Material

Steam (etc) @ 1.00 per hr.

Simultaneous Removal of Fe and Cu.
Suggested Method No. 3.

In this method the process is not changed up to step #4. At this point steps #4, #5, #6, #7, #8, and #9 are omitted. Then the solution is oxidized with bleach, neutralized with soda ash, skipping step #12 and filtering the solution ready for use.

It would seem that Nickel flake is a rather expensive reagent even at the reasonable price of 38¢ per pound. This material can be very cheaply converted to sulphate by a method devised by the writer at Silver Lake. The supposed insolubility of flake in acid alone is not an actual fact.

The less expensive soda ash with its ability to precipitate copper more readily than nickel is here substituted. This method will of course increase the consumption of soda ash, but other factors more than compensate, as is seen below.

The nickel fines moreover are only consumed to the extent of 66 %.

An analysis of the cement shows this.

Date	Cement Analysis.		H ₂ O
	Cu	Ni	
6-28-20	29.4	15.28	
"	15.2	7.98	48

As we sell this material at 10¢ per pound of copper contained or about 3¢ per lb. of cement, its recovery for the crystallizing pans would seem profitable. (See separate report on this)

In this method the saving in labor is about as follows.

Step	#	Men	3 2/3 hrs	(# tanks)	
"	4	2	2 1/2	"	58 2/3 HR
"	5	"	2 1/2	"	5 1/3
"	6	"	1 1/2	"	8 -
"	7	"	4	"	(4)
"	8	"	1 1/2	2 tanks	2
"	9	"	3/4	"	3
"	12	"	1 1/2	"	2

Using new bottomed tanks (see above)

20 2/3

20 2/3 79

Subtracting an extra hour for the additional time of adding soda ash to each of the two large tanks this represents a saving of 77 2/3 hrs labor per day, or 77 hrs with present tanks which @ 62 1/2 ¢ is equivalent to \$1262.04 per month (\$6 a day).

The following summary is obtained as before, the saving being,

Time (labor)	77 hrs per day
Time (Flow sheet)	9 hrs 50 min.
Production increase	(20 hrs) 68.2% 24 hrs. - 81.8%
Production	20 hrs 3069.65 gals.
"	24 " 3693.58 "
Labor cost saving	20 " \$1262.04 per month
(Increased cost soda ash - 3069 gals	\$18.59)
minus saving of H ₂ SO ₄ 12.72 p.m.	\$45.42
Steam etc. saved @ \$1.00 per hr.	\$228.56

The enormous saving both in labor and increased production without any increase in apparatus and without changing the basic reactions is obvious.

Frederick H. Zone

As the Fe is not reduced - no by product used of Ni, also Nickel is needed to make the, and from waste to supply.

OUTLINE

o f

Nickel Sulphate Purification Processes - Edison Storage Battery.

PRESENT METHOD.

Step.	Operation.	Time.	Labor.	Cost.
1.	Sol'n from cranes to sumps.	5hrs.	3.44	
2.	Fpd. carbonates pressed.	(2)2 hrs.	2.50	
3.	Dissolve Ni_2CO_3	(2)1-1/2	1/87	
4.	Add Ni fines to remove Cu.	(2)3-2/3	4.58	
5.	Neutralise with Na_2CO_3 .			
6.	Siphon to settling tank.	(2) 1/2	.63	
7.	Settle 4 hrs.	4	---	
8.	Siphon to Fe purifying tank.	(2) 1/2	.62	
9.	Acidifying (40 lbs. H_2SO_4)	3/4	.47	
10.	Bleach-oxidation			
11.	Boil	2	---	
12.	Neutralise with Na_2CO_3	(2)1/2	.63	
13.	Add Na_2CO_3 to remove Cu.			
14.	Pump thru press to storage tank.	1/2	.31	
	Total	2hrs. 55min.		

COSTS. (June)

Sulphuric Acid (33,306)	\$	495.68
Soda Ash (81,900)		2426.26
Bleach (8,413)		268.89
Ni (fines) (1,609)		611.42
Ni (flake) (2,751)		750.28
Total labor		1152.63

Nickel sulphate deliv. 47,450 gals
= 59,312 lbs.

Copper Cement:

Jan. - Nov. (1919) 2220 lbs.
Jan. - May (1920) 724 "

PROPOSED METHOD No. 1. and No. 2.

#1				#2			
Step.	Operation.	Time	Saving Cost.	Step.	Operation.	Time	Saving Cost.
1.	See present method.			1.	See present method.		
2.	" " "			2.	" " "		
3.	" " "			3.	" " "		
4.	" " "			4.	" " "		
5.	(omit)	2/3	.82	5.	" " "		
6.	(omit)	(2)1/2	.62	6.	(omit)	4-1/2	.63
7.	(omit)	4	---	7.	(omit)		
8.	Siphon to Fe purifying tank.			8.	Siphon to Fe purifying tank.		
9.	(omit)	3/4	.47	9.	(omit)	3/4	.47
10.	Bleach-oxidation.			10.	Bleach-oxidation		.60
11.	Boil			11.	Boil		
12.	(omit)			12.	(omit)	(2)1/2	.53
13.	Add Na_2CO_3 to remove Cu.			13.	(omit)		.60
14.	Pump thru press to storage tank.			14.	Pump thru press to storage tank.		
Total saved, 5 h 55 m == 160 hrs per Mo.				5-3/4 hrs 8.93			
Labor -- @ 2.20 (see p.m. sheet) = \$343.20				Material 26 7.20 187.20			
Steam etc. --- 150. --				Labor, 5-3/4 2.20 328.90			
\$ 493.20				Steam etc. 149. --			
				\$ 665.10			

*Doughtery - go over & see
the man & get dated. If find out
all about this. Thomas is going
to be a change of Manager - 10/23/20
do all the recovering at U.S.
Promotes J. F. Austin.*

D
1920

"Battery
Storage"

To: F. W. Cunningham, Mgr. Eng. Dept.

Subject: Proposed Change of Method for Making Nickel Solution.

Introduction:-

Present Method

Nickel Carbonate, obtained by precipitating the nickel solution in the mumps, is dissolved by means of Sulphuric Acid in tank on platform of third floor. This is siphoned to the tanks below. Here the Copper is precipitated out of solution, by means of nickel fines and soda ash solution, in the form of Copper Cement. The solution is allowed to settle for at least 1/2 hour and is then siphoned to the tanks on the platform of the 2nd floor. A little Copper Cement always comes down with the solution necessitating a settling for four hours. Then it is siphoned into the iron tanks on the second floor. Solution is made solid with sulphuric acid and hypo solution is added and boiled until free of chlorine fumes. It is then neutralized (if all the iron is oxidized) with soda and if any copper is present we precipitate it out with soda ash.

Proposed Change:-

This consists essentially in precipitating the iron and copper in the same tank.

Details:-

The Carbonate is dissolved as at present on the platform on the third floor and is siphoned down to the tanks below it, 15 inches of hypo solution are run into the tank and solution boiled until no more chlorine fumes are evolved. Bring sample to laboratory and test for iron. When it is all oxidized add nickel fines and precipitate the copper as at present, finishing by neutralizing with soda ash. When free of copper, allow to settle for one hour. Siphon to stock solution tank. Pump through filter press to tank on sixth floor.

Notes:

The tanks on the second floor can be used for the same purpose. The tanks on the platform of the second floor can be used as stock solution tanks.

Necessary Changes:-

The four tanks on the third floor will need covers and pipe to carry off the chlorine fumes. This will not be necessary

for the tanks on the second floor as they are at present provided with pipes for that purpose.

Remedy for "Cleaning of Tanks" Problem:

The covers above mentioned can be made so that they can be removed at will or held vertical by means of a pulley arrangement attached to the ceiling, as is large iron tank on the first floor, or one similar to that of Copper Sulphate tank on the fourth floor.

Advantages:

1. **Cost of Construction.** - There will be no added cost after the slight changes above mentioned are made.
2. **Labor.** - Two men can easily handle five tanks, thus making it unnecessary to hire any additional labor.

3. Time.

Present Process

Solution of Carbonate and siphoning	1/2 hour
Precipitation of Copper	5- "
Settling	1/2 "
Siphoning to Balcony 2nd floor	1/2 "
Settling	4- "
Siphoning to "Iron" tanks	1/2 "
Acidifying	1/2 "
Addition of hypo	1/2 "
Boiling off Chlorine	1-1/2 "
Removing Final Copper	1- "
Total	14-1/2 "

Proposed Process

Solution of Carbonate and siphoning	1/2 hour
Addition of Hypo	1/2 "
Boiling off Chlorine	1-1/2 "
Precipitating Copper	5- "
Siphoning to Storage Tank	1/2 "
Settling	1- "
	9 "

Saving of time is 5-1/2 hours for each tank of finished solution.

4. **Production.** - If necessary we can use all the tanks for making nickel solution.

5 Tanks have capacity of 1,000 gallons	5,000
2 " " " " 425 "	850
1 " " " " 500 "	500
1 " " " " 250 "	250
	<u>250</u>
	6,600

Production per day 6,680 gallons
Present Production per day 1,720 "

Increase of 4,960 " or 292%

5. Materials. -

(a) 40 lbs. Sulphuric Acid would be saved per tank or approximately 360 lbs. Sulphuric Acid per day.
This amount is at present used to acidify solution before adding hypo.

(b) 30 lbs. Soda Ash per tank or approximately 200 lbs. per day.

This amount is used in precipitating the copper that is usually dissolved when solution is made acid to precipitate the iron.

6. Money.

(a) Sulphuric Acid - cost .0094 per lb.
Saving per year (300 days) 108,000 lbs.
\$1015

(b) Soda Ash - cost .03 per lb.
Saving per year 60,000
\$1800.

(c) Cost of operation per month \$12.9064 per 100 lbs.
H₂SO₄/H₂O
Cost of proposed method of operation per month 9.1395 per 100 lbs.
H₂SO₄/H₂O
Saving per month \$ 3.766 " " "

Maximum Production per month proposed method 233,100 lbs.

Saving per month 8,780
12
\$106,560

Saving per year
Total - about \$100,000 saved per year.
Figures derived from data on Page 4.

Nickel Sulphate Solution:

If the production of Nickel Sulphate Solution be increased 293%: providing no extra apparatus is required or no extra labor, to increase the overhead expense of the department; the cost per lb. would be as detailed figures below:-

Crane Room Consumption

Theoretical quantity required per crane hr.	6.5 gallons.
Crane hrs. for the month of June, 1920	7314.67 hrs.
Quantity required for June	47,545.355 gallons.
Amount delivered by Chemical Lab. per day	1825. "
26 working days	47,450. "
1.25 lbs. per gallon of single Ni Salts	59,312.5 lbs.

Production for the month of June 59312.5 lbs.

Production increased 293% 233,096.13 "

Material required for increased production.

	value	cost per 100 lbs.
130,892.56 lbs. of Sulphuric Acid	\$1,948.102	
321,867 lbs. Sodium Carbonate	9,535.20	
33,065.09 lbs. Bleaching powder	1,056.74	
Ni Flake & fines	<u>5,767.16</u>	
Total Material	18,307.12	\$7.6538.
Labor	1,162.63	.4945
Expense	<u>1,844.21</u>	<u>.7912</u>
Total	\$21,305.96	\$9.1395

Cost to manufacture nickel sulphate - June \$12.9064 per 100 lbs.

Cost to manufacture NiSO_4 at increased production

9.1395 " " "

Amount saved per 100 lbs.

\$ 3.7669

Julius F. Austin

Edison Storage Battery Co.



ORANGE, N.J., U.S.A.

Aug. 12, 1920.

Give me this tomorrow

IN REPLYING
ADDRESS THE COMPANY
AND REFER TO

From: F. W. Cunningham, Eng. Dept.
To: Mr. F. A. Edison
Subject: Improvements to the Chemical Operations Shop

Since November 1918, a number of requests have been made for improvements to the apparatus and arrangement of the Chemical Operations Shop, but the work has not been completed, with the result that we have for a very considerable length of time been operating under considerable difficulty and with constant danger of interruption of production. Some delays have occurred, and the desired increase of production has been, to a large extent, limited by the lack of proper maintenance and the improvements requested. Much of this delay is due to delay in ordering material and work by men no longer with the company.

Unless you feel that the suggestions to change our method of solution recovery are likely to be immediately available and valuable, we wish to proceed at once with the changes previously outlined to enable us to operate safely by the standard method which has been used for years.

Within the last week or so all the equipment required for the nickel recovery work has been received with the exception of some lead piping, but we have enough of this on hand to proceed with the work.

For your information, several recommendations covering this work are attached.

F. W. Cunningham, Mgr.,
Engineering Department.

FAC

FWO/JMA

J.C. Wilson
8-13-20

June 18, 1920.

FROM: W. W. Sheldon
TO: F. W. Cunningham, Mgr. Eng. Dept.
SUBJECT: Soda Solution For Plating Solution
Wash Sumps.

Soda Ash is now added to the solution wash sumps by the following method. A 110 gallon steel drum is placed at each set of sumps. It has an open top into which sets a wire basket. Soda Ash is shoveled into the basket and is dissolved by a stream of water (city water) running over it. The solution then runs out of the bottom into troughs and on to the sumps.

This method has several undesirable features which are: -

1. The solutions vary over a wide range in the content of soda ash. This makes the control of the solution to the sumps very difficult and causes a waste of Soda Ash.
2. The time of one man is required most of the time to shovel soda ash into the drums.
3. Soda Ash has to be handled in small amounts and can not be stored in any quantity near the dissolving drums.

It is recommended that these drums be replaced by two square steel tanks about 6' x 40" x 4" deep, located on the filter press platform in the middle of the room. (See Sketch). This platform will be available as the press is to be removed. A block and tackle should be provided so that the bags of Soda Ash can be hoisted to the platform which is large enough to store a days supply. The operator will then be able to dump two or three bags in each tank in the morning which will last until noon time, when it can be filled again, and last until night. In place of using city water it is recommended that the filtrate from the carbonate presses be used as it contains about 1 1/2 gms. per liter of Soda Ash. This will represent a saving of 175 lbs. per day of soda ash at 2¢ per lb. or \$3.50 and \$.40 of water making a total of \$3.90. The yearly saving will be \$1,170.00.

There will also be a saving in soda ash due to a closer regulation of the solution. This can not be estimated but it is not unreasonable to expect that it may amount to as much as a bag a day which is worth \$6.00 a bag or \$1,800 annually.

As mentioned above the entire time of one man is required under the present method to attend to the dissolving of soda ash. Under the proposed method probably not more than two hours will be required. This will make him available for such work as cleaning filter presses, sumps, moving material etc., which is now somewhat short handed.

ESTIMATED COST -

2 6 ft. x 40" x 4" deep Steel Tanks @ \$75.00	\$150.00
45 sq.ft. 16 mesh Steel Screen @ 25¢-1 sq.ft.	11.25

-2-

ESTIMATED COST.

45 sq.-ft. 1 mesh Steel Screen @ 20¢ 1 sq.-ft.	\$9.00
52 ft. 2"x2" -2.44 lb angle @ 6¢	7.61
Iron Workers 15 hrs. @ 95¢ & 70¢	22.55
50 ft. 1 1/2" Iron Pipe @ 15¢	7.50
25 ft. 1 1/2" " " @ 18¢	4.50
30 ft. 2" " " @ 45¢	9.00
Pipe fittings & Valves	25.00
Pipe fitters 30 hrs. @ 1.50 & 70¢ (fitter & helper)	76.50
Riggers 20 hrs. @ 80¢ & 70¢	27.50
500 lbs. Chain Hoist	25.00

\$ 275.51

Plus 10% for misc.

\$ 30.55

\$ 415.06

W. H. Sheldon

June 17, 1920.

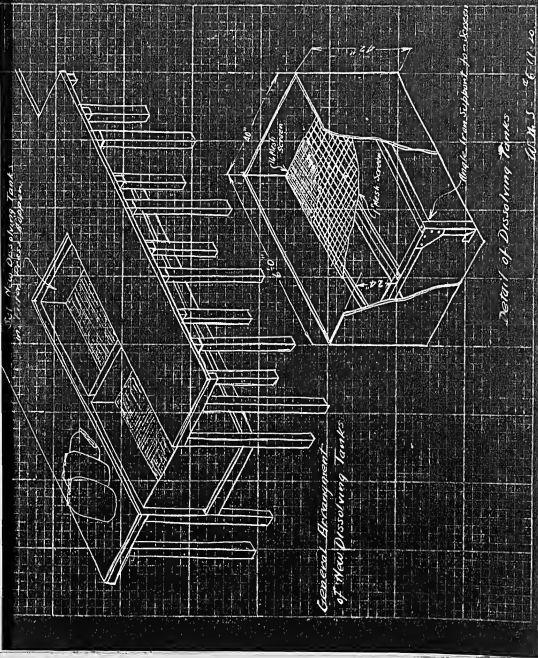
In event it is not desired to use the method just described, it is recommended that the piping to the present dissolving drums be re-arranged in manner similar to that shown in sketch #6 - 18-12. This will permit a saving of the 175 lbs per day of soda ash which is contained in the press filtrate at \$1,170.00 per year.

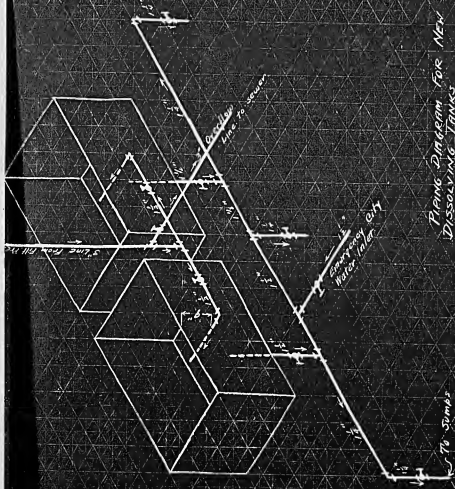
The cost of making the change will be: -

10 ft. 3" pipe @ 45¢	\$4.50
50 ft. 1" " @ 12¢	6.00
Valves & fittings	25.00
Pipe fitters 20 hrs. @ 1.50 & 20¢	51.00
	<hr/>
	\$ 86.50
Plus 10%	8.65
Total estimated cost..	<hr/>
	\$ 95.15

W. H. Sheldon.

W





Piping Diagram for New 3000 Rev
Dissolving Tanks

4/14/52 76-14-20

To Sump

649 ✓
June 17, 1920.

FROM: W. M. Sheldon
TO: F. W. Cunningham, Mgr. Eng. Dept.
SUBJECT: Additional Distilled Water Storage in
Electrolyte Department.

The Chemical Department desires to have additional distilled water storage capacity as its present capacity is limited to 1120 gallons which is about 75% of a days requirements under a 2600 A-4 schedule. An additional storage tank is desired to keep the distilled water that it is proposed to obtain from the oranges separate from the present supply. This is desirable in case nickel plating solution in anyway leaks into the steam coils or drain line, for if the two sources of supply are piped to separate tanks, impurities which might get into one, will not effect the other.

It is recommended, therefore, that an additional distilled water tank be installed on the second floor in the Electrolyte Department. This tank should be of about 600 gallons capacity, of either wood or steel construction, provided with a cover, and lined inside with a thin gauge sheet copper tinned on one side. In order not to obstruct the floors it is suggested that the tank be suspended from the ceiling between the beam from column E12 and the next beam to the east of it, and also as close to the Chemical Laboratory Wall as possible. For detail of suspension see Sketch #6-15-20. It should be connected with the drain from the heating coils, have an overflow pipe and be piped to mixing drums.

ESTIMATE OF COST

1 - Wooden Tank - 600 gals. Cap.	\$75.00
70 lbs. 8 oz. Sheet copper-tinned one side @ 40¢	28.00
Sheet Metal Worker 20 hrs. @ 90 ¢ 70%	32.60
Steel for tank supports	20.00
Labor for fabricating 80 hrs. @ 90 ¢ 70%	32.60
Riggers 25 hrs. @ 80 ¢ 70%	34.00
	<u>\$222.00</u>

Plus 10% 22.22

Total Estimated Cost..... \$ 244.22

W. M. Sheldon.

649 ✓
June 14, 1920.

FROM: W. M. Sheldon
TO: F. W. Cunningham, Mgr. Eng. Dept.
SUBJECT: Additional Distilled Water Supply to
Electrolyte Plant.

The present supply of distilled water used in making electrolyte comes from the Flake Drying Boilers. This is only adequate for an electrolyte production of about 2200 A-4 cells. It will have to be increased immediately if electrolyte production is not to be handicapped.

It is recommended that the condensation from the heating coils for the Crane Nickel Plating Baths be used as an additional supply. If 18 cranes are in operation 19 hours per day the condensate from their heating coils should be about 1,000 gallons, about half of which will be required to bring the electrolyte capacity up to 2500 A-4 cells. The cost of collecting this condensate and piping it to the distilled water storage tank will be about \$150.00.

It might be well to mention that the only reason that the shortage of distilled water is not halting up electrolyte production at the present time is the fact no causticizing operations are being run. This makes 600 gallons of distilled water available each day which will not be obtainable when causticizing is resumed. It also might be added that the Test Dept. is using electrolyte on some days at a 2500 A-cell rate. (12 Drums or 1,500 gals.)

W. M. Sheldon.

M

599 ✓

EDISON STORAGE BATTERY CO.

Memorandum

May 26, 1920.

FROM: W. N. Sheldon
TO: F. W. Cunningham, Mgr. Eng. Dept.
SUBJECT: Increase in Capacity of Lithia Solution Tanks.

PRESENT EQUIPMENT

The Lithia Solution Equipment at the present time consists of the following apparatus:-

- 3- 46" dia x 48" high - 500 gal. steel tanks, equipped with wire screen dissolving baskets, and open end steam, air, and distilled water pipes.
- 1- 30" dia x 16 ft. long 500 gal. steel storage tank.
- 1- 5" x 8" Belt driven air compressor.

CAPACITY OF PRESENT EQUIPMENT

The normal capacity of each of the three solution tanks is 250 gallons of Lithia Solution per 48 hours, or a total daily capacity of 435 gallons for the three tanks. The capacity of the storage tank is 500 gals. which is about enough for one days supply under a 1700 A-4 production.

DEFECTS IN PRESENT PLANT

The present solution tanks are too small in capacity to satisfactorily furnish Lithia Solution for a 1700 A-4 cell production, the daily requirement being 470 gallons of solution. This is due to the fact that, owing to lack of capacity, the solution can not remain in the tanks for a period of 48 hours, about 32 hours of which are required for cooling the solution after the crystals have been dissolved in it. If the solution has to be drawn into the storage tank before the end of the 32 hour period it will still be warm, and as it is a saturated solution it will crystallize out a certain amount of lithia in the pipes and storage tank upon cooling in them. This requires a frequent cleaning of the tank as well as opening up clogged pipes, which it is desirable to eliminate.

The air compressor which is used to furnish air for the agitation of the solution tanks as well as to the first and third floor is too small to meet the present demands made of it, and is in a very poor mechanical condition. It has caused delay upon numerous occasions. This will have to be replaced. According to Mr. W.P. Achenbach a request for the installation of a large pump is to be presented by his department. Therefore a request for an appropriation for a new compressor will be omitted in this report to avoid duplication. This matter however needs immediate attention.

The Lithia Solution is at present drawn from the solution tanks into the storage tank by vacuum. This method has not given complete satisfaction owing to the loss of vacuum on various occasions due to repairs to pump, demands made up on vacuum for other uses, etc. Consequently a gear pump will be recommended for ordinary use, with all the solution tanks. The present vacuum system be retained as an emergency outfit.

EDISON STORAGE BATTERY CO.

Memorandum

-2-

LITHIA SOLUTION REQUIREMENTS FOR A 2500 A-4 PRODUCTION

Electrolyte	Gal. Lithia Res'd
Standard let.	400
B. H. Solution	25
Refilling	25
Renewal	180

Total per day 640 Gallons.

The above figure of 640 gallons represents the minimum requirements for a 2500 A-4 Production. It is reasonable to expect that the renewal solution requirements may continue to grow as the number of cells in operation increases, also that the demand for standard let. solution may exceed the 400 gallon estimate of production continues to increase.

RECOMMENDATIONS FOR INCREASING EQUIPMENT TO 2500 CELL CAPACITY

DISSOLVING OF LITHIA CRYSTALS

It has been found that if lithia is dissolved in the steam jacketed kettle which was formerly used for causticizing potash, it will be possible to turn at least eight batches per day from it, or a total of about 850 gallons. This solution will be hot and should be allowed to cool before using. It is proposed, therefore, to use the three tanks now used as dissolving tanks, for cooling tanks, the batches being pumped to them as finished by the steam jacketed kettle. A portable motor driven gear pump should be used for this purpose. The steam jacketed kettle should be provided with a conical sheet iron cover, a flue, and either a block and tackle, or chain hoist for raising the cover at charging time. The cooling tanks should be provided with sheet iron covers.

STORAGE TANKS

The present Lithia Solution storage capacity is 500 gallons, or less than one day's requirements under a 2500 A-4 production. Such a storage capacity is all together too small and should be increased if serious delays are not to occur due to such unavoidable causes as strikes, inability to secure raw material, mechanical breakdown, etc. It is recommended therefore that a 1600 gallon tank be installed on the platform on the second floor. This will increase the storage capacity to 5 days requirements under the 2500 A-4 schedule.

One decided advantage of having two storage tanks will be that it will be possible to make an analysis of each storage tank when full, and so do away with the analysis of each small batch as finished in the dissolving tanks. This will eliminate about 50% of the analysis now done on Lithia Solution.

PUMPS

A portable motor driven geared pump will be required for pumping the solution between the different parts of the plant. It should be provided with hose ends on both the inlet and discharge. Plug outlets for the electric current to drive the pump should be provided at each end of the plant and located if possible on the columns.

EDISON STORAGE BATTERY CO.

Memorandum

-2-

PIPING

The piping should be arranged so as to permit the use of the pump, and still retain the vacuum system of handling where it is now installed.

ESTIMATE OF COST OF NEW LITHIA SOLUTION EQUIPMENT

1 - 10 ft dia x 28" high Steel Storage Tank	\$100.00
Riggers 15 hr. @ 75¢ + 70%	19.15
1 - Portable motor driven gear pump	150.00
Electric wire, switches, conduit, etc.	15.00
Electricians 10 hrs. @ 80¢ + 70%	5.44
Pipe 75 ft. @ 10¢	7.50
4- Valves @ \$5.00 each	12.00
250 sq.ft. #16 gauge sh. iron @ 8¢ per ft.	20.00
Labor fabricating Tank Covers 40 hrs. @ 80¢ + 70%	54.40
Pipe fitting 20 hrs. @ 1.50 + 70%	75.12
Labor fabricating sheet iron parts 20 hrs. @ 80¢ + 70%	27.20

\$486.79

Plus 10%

48.68

Total estimated cost \$535.47

W. H. Sheldon.

N

14-00000

with sliding
to outside

WATER

THE WELL-KNOWN DEPARTMENT

1086

01234567891011121314151617181920212223242526272829303132333435363738394041424344454647484950515253545556575859606162636465666768697071727374757677787980818283848586878889909192939495969798991001011021031041051061071081091101111121131141151161171181191201211221231241251261271281291301311321331341351361371381391401411421431441451461471481491501511521531541551561571581591601611621631641651661671681691701711721731741751761771781791801811821831841851861871881891901911921931941951961971981992002012022032042052062072082092102112122132142152162172182192202212222232242252262272282292302312322332342352362372382392402412422432442452462472482492502512522532542552562572582592602612622632642652662672682692702712722732742752762772782792802812822832842852862872882892902912922932942952962972982993003013023033043053063073083093103113123133143153163173183193203213223233243253263273283293303313323333343353363373383393403413423433443453463473483493503513523533543553563573583593603613623633643653663673683693703713723733743753763773783793803813823833843853863873883893903913923933943953963973983994004014024034044054064074084094104114124134144154164174184194204214224234244254264274284294304314324334344354364374384394404414424434444454464474484494504514524534544554564574584594604614624634644654664674684694704714724734744754764774784794804814824834844854864874884894904914924934944954964974984995005015025035045055065075085095105115125135145155165175185195205215225235245255265275285295305315325335345355365375385395405415425435445455465475485495505515525535545555565575585595605615625635645655665675685695705715725735745755765775785795805815825835845855865875885895905915925935945955965975985996006016026036046056066076086096106116126136146156166176186196206216226236246256266276286296306316326336346356366376386396406416426436446456466476486496506516526536546556566576586596606616626636646656666676686696706716726736746756766776786796806816826836846856866876886896906916926936946956966976986997007017027037047057067077087097107117127137147157167177187197207217227237247257267277287297307317327337347357367377387397407417427437447457467477487497507517527537547557567577587597607617627637647657667677687697707717727737747757767777787797807817827837847857867877887897907917927937947957967977987998008018028038048058068078088098108118128138148158168178188198208218228238248258268278288298308318328338348358368378388398408418428438448458468478488498508518528538548558568578588598608618628638648658668678688698708718728738748758768778788798808818828838848858868878888898908918928938948958968978988999009019029039049059069079089099109119129139149159169179189199209219229239249259269279289299309319329339349359369379389399409419429439449459469479489499509519529539549559569579589599609619629639649659669679689699709719729739749759769779789799809819829839849859869879889899909919929939949959969979989991000100110021003100410051006100710081009101010111012101310141015101610171018101910201021102210231024102510261027102810291030103110321033103410351036103710381039104010411042104310441045104610471048104910501051105210531054105510561057105810591060106110621063106410651066106710681069107010711072107310741075107610771078107910801081108210831084108510861087108810891090109110921093109410951096109710981099110011011102110311041105110611071108110911101111111211131114111511161117111811191120112111221123112411251126112711281129113011311132113311341135113611371138113911401141114211431144114511461147114811491150115111521153115411551156115711581159116011611162116311641165116611671168116911701171117211731174117511761177117811791180118111821183118411851186118711881189119011911192119311941195119611971198119912001201120212031204120512061207120812091210121112121213121412151216121712181219122012211222122312241225122612271228122912301231123212331234123512361237123812391240124112421243124412451246124712481249125012511252125312541255125612571258125912601261126212631264126512661267126812691270127112721273127412751276127712781279128012811282128312841285128612871288128912901291129212931294129512961297129812991300

420-7055

1997

543 ✓
April 30th, 1920.

WICKEN PLATING SOLUTION RECOVERY PLANT.

ESTIMATE OF COSTS.

An appropriation to the amount of \$1285.50 has been authorized covering the purchase and installation of part of the equipment mentioned in this report. (For items covered, see report of Mr. P. D. Wright to Committee on Engineering, April 1st, 1920).

The equipment mentioned in the following estimate will be required in addition to that mentioned in Mr. Wright's report and an appropriation covering it is requested: -

(a) Leaching Tank \$75.00

Tank

Lead Lining 42 sq. ft. 8 lb. lead @ 10¢ per lb. 53.60

Labor - 3 days @ \$8.00 per day plus 70% 40.80

(b) Settling Tank

Tank 125.00

Lead Lining 134 sq. ft. 8 lb. lead @ 10¢ per lb. 107.20

Labor - 3 days @ \$8.00 plus 70% 40.80

Platform Lumber 100.00

Labor - 3 days @ \$8.00 plus 70% 80.60

(c) Storage Tanks

4 Tanks @ \$125.00 each 600.00

Lead Lining 636 sq. ft. 8 lb. lead @ 10¢ per lb. 508.80

Lead Pipe (heating coils) 60 ft. 2½" @ 1¢ @ 15¢ ... 72.00

Labor - 14 days @ \$8.00 plus 70% 190.40

Valves and fittings 15.00

(d) Copper Extractor

Lumber (frames) 750 ft. @ \$75 per M 56.25

Lead Pipe (heating coils) 90 ft. 2½" @ 1¢ @ 15¢ ... 108.00

Labor - 8 days @ \$8.00 plus 70% 108.80

Valves & Fittings 22.50

(e) Bronze Pump	\$50.00
Jack Shaft and Bollegs	10.00
Labor - 2 days @ \$6.00 plus 70%	20.40
(f) Gould Triplex Pump	500.00
Valves & Fittings	20.00
Labor - 10 days @ \$6.00 plus 70%	108.00
(g) 24" Exhaust Fan	150.00
Labor - 5 days @ \$6.00 plus 70%	51.00
(h) Piping, Fittings, Labor etc.	200.00
	\$318.15
Plus 10% for miscellaneous	318.85
	\$636.97
Appropriation granted 4-1-20	1229.50

TOTAL ESTIMATED COST - - - \$4741.27

The above estimate is based on the best information available at the time of preparation. It is subject to change in case of any change in the scope of the work or in the prices of materials or labor. The estimate is for the purpose of securing an appropriation for the work and is not a contract. The actual cost of the work will be determined by the actual work done and the actual prices of materials and labor. The estimate is for the purpose of securing an appropriation for the work and is not a contract. The actual cost of the work will be determined by the actual work done and the actual prices of materials and labor.

W. M. SHELDON.

The above estimate is based on the best information available at the time of preparation. It is subject to change in case of any change in the scope of the work or in the prices of materials or labor. The estimate is for the purpose of securing an appropriation for the work and is not a contract. The actual cost of the work will be determined by the actual work done and the actual prices of materials and labor. The estimate is for the purpose of securing an appropriation for the work and is not a contract. The actual cost of the work will be determined by the actual work done and the actual prices of materials and labor.

The cost of the work is estimated to be \$4741.27. This estimate is based on the best information available at the time of preparation. It is subject to change in case of any change in the scope of the work or in the prices of materials or labor. The estimate is for the purpose of securing an appropriation for the work and is not a contract. The actual cost of the work will be determined by the actual work done and the actual prices of materials and labor. The estimate is for the purpose of securing an appropriation for the work and is not a contract. The actual cost of the work will be determined by the actual work done and the actual prices of materials and labor.

543 ✓
April 28th, 1920.

ENLARGEMENT OF NICKEL PLATING SOLUTION RECOVERY PLANT.

NEW PLATING SOLUTION REQUIREMENTS.

The present Nickel Plating Solution Recovery Plant has a normal daily capacity of about 1700 gallons of plating solution. Owing to increasing the production now scheduled to 2500 coils per day, 2050 gallons per day will be required May 1st, 1920.

The maximum requirements of the crane rooms exceed 2050 gallons per day when all the cranes are in operation. In such an event, the demand for nickel solution would be 2700 gallons per day. It was considered best, therefore, to figure the capacity of the enlargement of the plant on this basis.

NECESSARY IMPROVEMENTS, ETC.

Equipment to be Balanced.

The equipment of the present plant is not well balanced - i.e., some parts of the process do not have sufficient capacity to take care of the subsequent parts of the process. This requires overtime work, either Saturdays or Sundays, in order that those parts of the process lacking capacity do not hold up the remainder. The extra pay for such work is practically a total loss to the company, because the regular force of men could handle the overtime work during regular working hours if sufficient equipment were provided. An example of this is the copper extractors, which have to be worked every Saturday afternoon and some Sundays, in order to supply the required amount of copper free solution for the operation of the iron oxidizers during the regular five and a half working days.

STORAGE CAPACITY NEEDED.

There is a serious lack of storage capacity for the finished nickel plating solutions. The present capacity provided for that purpose is slightly in excess of 1000 gallons or about 40% of one day's requirements under the new May 1st production schedule. To overcome lack of storage capacity, it has been necessary in the past to use two and sometimes three of the five iron oxidizing tanks for storage purposes. This will be impossible under the new production schedule. It will be necessary, therefore, to install storage tanks (preferably four 1000 gallon capacity) if serious delays due to breakdowns, labor troubles, lack of material, etc. are to be avoided.

The most desirable location of the storage tanks appears to be the following: - Two tanks (\$44 - 45) to be located on the roof of the building in the shed which was formerly provided for storage tanks. These tanks should be lead-lined, provided with wooden covers, connected to the pump on the second floor by lead pipe, and be provided with overflow and some kind of a full tank alarm or signal located at the pump on the second floor. To prevent these tanks from freezing in severe winter weather, it would be advisable to provide them with a small steam heating coil. Probably a single turn of 1" lead pipe would be sufficient. These tanks could keep

the cranes operating for a full day in case of a breakdown in the pumping equipment, as they would discharge to the cranes by gravity. The other two tanks (#24 - 25) should be lead-lined, provided with a lead-lined cover similar to those on the oxidizers, a 25 sq. ft. surface lead steam coil, and flues to the chlorine absorber, as well as being piped to the Gold - Triplex Pumps (#28 - 29) and the crane rooms. These two tanks, if so equipped, could be used in an emergency for iron oxidizers and would prevent a recurrence of the delay in recovering nickel solution, which recently occurred when three iron oxidizers were under repairs at one time. Furthermore, they could be used as copper extractors or settling tanks if the emergency necessitated.

In order to locate the two tanks on the second floor, it will be necessary to rearrange one of the tanks used in the rubber treatment. This would not be a very difficult matter.

EXTRACTING MOISTURE FROM COPPER SLUDGE, AND NI. IRON SULPHATE.

In the event of the shipping of the nickel iron hydrate, and copper chloride now obtained in the oxidizers, and extractors respectively to the Silver Lake Plant, it is suggested that if possible use be made of a centrifuge machine to extract as much moisture as possible from them. The moisture content as an average is about 60%, and in this manner could be reduced to probably 20%. Besides making the material much easier to handle, it would save a considerable amount of the haulage charges. A centrifuge that is suitable for this use is available from the Salvage Division at Silver Lake. Before making a definite decision regarding this suggestion, it would be best to determine experimentally the exact ability of a centrifuge to handle these materials, as it is not possible to calculate same.

PUMPING EQUIPMENT.

The iron oxidizing tanks are at present equipped with but one triplex pump. In case of a breakdown their operation would be badly handicapped. To overcome this danger and provide additional means of pumping to proposed storage tanks on the roof, a duplicate of the triplex pump at present in operation there should be installed. (#25)

The 2" Surin Centrifugal pump is completely worn out. The Salvage Division has a 2" Bronze Centrifugal at Silver Lake, which could be obtained to replace the old pump. The jack shaft and pulleys for this pump are very badly acid eaten, and should be replaced. (#26)

STEAM LINES.

The steam lines to the heating coils in the tanks should be provided with a pressure reducing valve, as well as a safety valve on the low pressure side of the reducing valve, set to blow off if the low pressure is exceeded. This will prevent breaking out heating coils in case the reducing valve fails to work properly and cut down the pressure. The blowing off of the valve will also notify the operator of the failure of the reducing valve to work properly.

VENTILATION.

The ventilation of the second floor is very poor. As soon as the exact location of the new equipment is decided upon, some mechanical means should be provided for its ventilation, preferably 24" motor driven exhaust fan.

The only necessity for the ventilation of the third floor is the vapor coming from the copper extractors. These tanks should be provided with wooden covers and flume similar to those in the copper sulphate crystallization plant on the fourth floor, as they have given complete satisfaction under similar conditions.

ACCIDENT PREVENTION.

The platforms, steps, belt guards and valve locations conform, but in a few instances with the Safety Standards of the State Department of Labor. They should be revised to comply with these regulations in order to prevent serious accidents, which are bound to occur as long as the plant is in its present condition.

CARBONATE FILTRATION.

The present press does not have capacity to take care of the new requirements so will have to be duplicated. (#2 on sketch)

DISSOLVING TANK.

An additional dissolving tank will be required to handle the press cake from the new filter press. (#4)

COPPER EXTRACTORS.

Three additional copper extractors will be required in addition to the three old ones and the one new one now being installed. (#5-6-7)

LEACHING TANK.

One additional lead-lined tank will be required for leaching. (#12)

SETTLING TANK.

One settling tank will be required in addition to the two in the old plant. (#17)

STEAM HEATING COILS.

The lead heating coils are very poorly constructed in the present plant. They should be constructed in future ones similar to sketch attached. This construction strengthens the coil and allows a free circulation of the liquid being heated, which increases the efficiency of the coil.

EDISON STORAGE BATTERY CO.

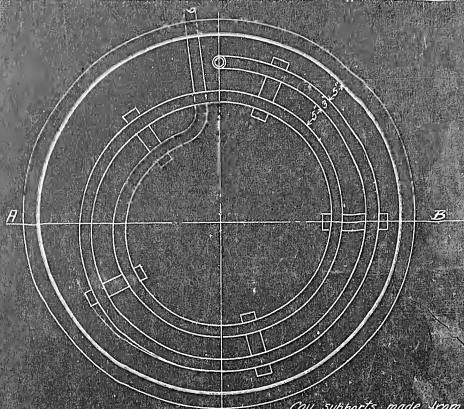
Title CONSTRUCTION OF LEAD
HEATING COILS FOR TANKS

Date April 14 1910

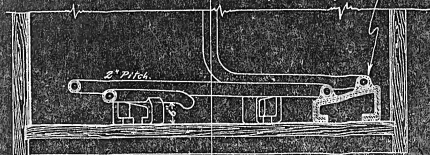
Drawn T. H. S.

Checked _____

Approved _____



Coil supports made from
3/32" steel covered with 8 lb.
hard lead. Attach to coils
by burning.



Section A-B

543 ✓
April 28th, 1920.

NICKEL PLATING SOLUTION RECOVERY PLANT.

(As it now is)

SCHEDULE OF DAILY OPERATIONS. COPPER EXTRACTORS.

....

<u>Time of Operation.</u>	<u>Tank Used.</u>	<u>Solution Used.</u>	<u>Tank Output Gallons.</u>
9 A.M. - 1 P.M.	#8	Top	250
9 A. M. - 4 P.M.	#5-6-7	Carbonate	600
1 P.M. - 5 P.M.	#8	Top	250
1 P.M. - 8:50 A.M.	#5-6-7	Carbonate	750
5 P.M. - 1	#8	Carbonate and Mother Liquor	250
			2100 Copper Free Solu- tion

- NOTE -

The above schedule is based on the uninterrupted operation of the extractors. As one tank is cleaned every three days, and there is some loss in time due to repairs to steam coils, etc., the above figure represents practically the maximum output of the plant, and can only be maintained by some overtime work.

DAILY SCHEDULE (24 Hours) COPPER FREE SOLUTION BOTTLING TANKS.

<u>Time of Operation.</u>	<u>Tank Used.</u>	<u>Solution Used.</u>	<u>Tank Output Gallons.</u>
8:30 A.M. - 12:30 P.M.	#14		650
1:00 P.M. - 5:00 P.M.	#15		200
5:00 P.M. - 8:30 A.M.	#14		750
	Old Lots		150
			1750

- NOTE -

As the above tanks are not subject to breakdowns, they are able to maintain this schedule.

DAILY SCHEDULE - IRON EXTRACTORS.

<u>Time of Operation.</u>	<u>Tank.</u>	<u>Gallons.</u>	
<u>1st Day</u>			
8:30 A.M.	#18	750	{ Add Hypo and heat at 12:30 P.M.
12:30 P.M.	#18	250	{ Add Soda at 5 P.M. - Heat all
		1000	{ night. Settle 7:30 A.M. - 12:30 P.M.
			{ following day.
12:30 P.M.	#19	400	{ Add Hypo at 5 P.M. and heat all
5:00 P.M.	#19	300	{ night. Add Soda 7:30 A.M. follow-
		700	{ ing day. Heat till 1 P.M. Settle
			{ 1 P.M. - 5 P.M.

End Day Repeat operations using tanks #20 - #21.

3rd Day Repeat operations using tanks #18 - #19.

- NOTE -

Tank #22 is always held as a storage tank, due to the shortage of storage capacity in the present plant.

543 ✓

April 28th, 1920.

NICKEL PLATING SOLUTION RECOVERY DATA.

.....

Sheet produced per crane hour 5.06 lbs.
Per Cent Flake produced from sheet 58.77%
Finished Flake per crane hour 2.97 lbs.
Flake per A-4 Equivalent 6 oz.
A-4 Equivalent per Crane Hour 7.92
Crane Hours per A-4 Equivalent 0.126
Fill in Nickel Solution per Crane Hour 6.5 gal.
Fill in Nickel Solution per A-4 Equivalent... .82 gal.

7WC
April 1st, 1920.

FROM: PAUL D. WRIGHT.
TO: COMMITTEE OF ENGINEERING
SUBJECT: INCREASED FACILITIES FOR CHEMICAL DEPARTMENT.

543
Approved by H. G. Brown
4-5-1920

The increase in equipment for the solution refining and recovery processes has been under consideration since November 1918. Partly completed drawings have been approved by Mr. Charles Edison.

The only work that has been started on this is the purchase and installation of four new filter presses, three of which are to be installed on the fourth floor of the lean-to for Flake Wash Water and Copper Solution, and one which is to go on the third floor as an addition to the Nickel Dept. A Shop Order has been issued for the installation of the three presses on the fourth floor and these are now being installed.

The next important step to meet the demand of increasing production is the increase in facilities for the Nickel Department. At the same time that this work is progressing, the increase of settling tanks for Flake Wash and Separating Solution is to be undertaken.

The facilities of the Chemical Dept. on the third floor of the lean-to of Building #137 to be increased are:

1. Nickel Dept.
2. Flake Solution
3. Flake Wash

1. In increasing the facilities of the Nickel Dept., it is proposed to install one of the new Johnson Filter Presses, a dissolving tank and four new boilers. To do this would require:-

- (a) Build Platform for Filter Press and Tank
Material..... \$100.00
Labor - 4 days @ \$22.00 plus 70% overhead 149.60
Painting - 2 days @ \$6.00 " " " 20.40
- (b) Install Filter Press
Labor - 2 days @ \$22.00 plus 70% overhead..... 74.80
- (c) Install Dissolving Tank
Labor 1/2 day @ \$22.00 plus 70% overhead 18.70
- (d) Purchase of 3 Tanks
Estimated cost of 3 @ \$125.00 each 375.00
Labor to install - 4 days @ \$11.00 plus
70% overhead..... 74.80
Painting - 1 day @ \$6.00 plus 70% overhead 10.20

(e) Necessary rearrangement of piping

Material \$ 50.00
Labor - 6 days @ \$11.00 plus 70% overhead..... 112.20

(f) Lead Lining of 3 Tanks

Material 300 sq. ft. @ 8 lbs. per sq. ft.
(2400 lbs.)..... 222.00
Labor - 10 days @ \$6.00 plus 70% overhead..... 61.60
1289.39

2. It is the intention to devote the two tanks now used for Separating Solution as added facilities for Make wash and install four new settling tanks for the Separating Solution. To do this would require:-

(a) Build platform for tanks - drawing C-2490

Material \$110.00
Labor to build - 4 days @ \$22.00 plus
70% overhead..... 149.60
Labor to paint - 2 days at \$7.00 plus
70% overhead..... 20.40

(b) Purchase of three new tanks (one on hand)

Estimated cost 3 @ \$125.00 each 375.00
Labor to install - 4 days @ \$11.00 plus
70% overhead 74.80
Labor to paint - 1 day @ \$6.00 plus 70%
overhead 10.20

(d) Moving Solution tank

Labor - 1 day @ \$11.00 plus 70% overhead..... 18.70

(e) Lead Lining 4 Sillers

Material 610 sq.ft. - 8 lbs. per sq. ft.
(4880 lbs.)..... 451.40
Labor - 15 days @ \$6.00 plus 70% overhead..... 153.00
\$ 1575.30

TOTAL FOR NICKEL DEPT.-----\$1290.00

" " MAKE WASH & SEPARATION SOLUTION-- 1575.00

" " ADDITIONAL EQUIPMENT FOR 3rd FLOOR

10% FOR MISC. ----- 286.00

\$3051.00

PAUL D. WRIGHT.

(c) Change in piping, etc.

Material \$100.00
Labor - 6 days @ \$11.00 plus 70% overhead..... 112.20

August 14, 1920.

From: Dr. F. W. Zones
To: Mr. F. W. Cunningham, Eng. Dept.

Supplementary Report No. 1.

Increasing Production by Decreasing the Present Number of Operations, etc.
Yesterday there was completed a lot of Nickel Sulphate purified on a commercial scale by the writer's method indicated in the previous report as method #3.

Operation

Two (2) batches of mixed carbonate from the sump mixed with about an equal amount of floor wash carbonate was dissolved in sufficient sulphuric acid until it was slightly acid to Congo Red paper.

It was then allowed to settle while the large lumps of carbonate were broken up so as to give as much carbonate surface area as possible to the solution. By this method of practically all of the iron, and a large part of the copper separates out of solution, making a later separation less difficult. The solution now practically neutral was filtered to an iron purifying tank on the second floor.

Incidentally it should be mentioned that the writer carried on this test without interfering with the regular production, there being tanks available as indicated in a previous report.

There is a decided advantage in getting a clear neutral nickel sulphate solution. At present the acid solution is neutralized to obtain this condition, first with caustic soda (NaOH) and then with soda ash (Na₂CO₃), the latter to remove copper. To neutralize a solution of Nickel Sulphate, it is necessary to add an excess of alkali which results in the precipitation and loss of considerable nickel as carbonate. By the writer's method as indicated, no loss is sustained up to this point. The use of caustic soda was eliminated as previously suggested.

As a precaution a small amount (2/5 usual quantity) of "hypo" was added. The resulting solution gave no test for iron. Therefore this bleach was not required confirming the report of July 24th. This also showed the effectiveness of removing iron by obtaining a neutral solution before transferring it to the second floor.

The nickel sulphate solution originally had a Sp. G. of 1.140, but because of pump difficulties which required considerable priming, it became diluted to a Sp. G. of 1.082. The volume of the solution was 3744 liters. The copper content was found to be 2.2 gms. per liter, indicating the total presence of 18.1 lbs. of copper.

A solution of soda ash of known strength was then prepared. While one of the men constantly stirred the boiling nickel sulphate, the soda ash solution was carefully added.

Removal of Last
Traces of Copper

When 37.5 lbs. of soda ash had been added, laboratory tests indicated the ab-

sence of copper, and the solution was ready for the storage tank. Theoretically the amount of copper present would have required 50.5 lbs. of soda ash, so that only 7 lbs. of soda ash were used in excess.

The Sp. G. (1.082) of the solution with its depth of 52 ins. is equivalent to about 32 ins. of a solution at 1.140, or in other words equivalent to one-half tank. Ordinarily for one tank full of solution about 220 lbs. of soda ash are used, or 110 lbs. per half tank. This is, of course, inclusive of the copper removal operation and the final step after the removal of iron, where considerable caustic soda is also used at present. Briefly, about one-third (1/3) of the usual soda ash was required, which incidentally gives a solution with less sulphate of soda in the electrolyte.

At the present time, a little trouble has been experienced in obtaining solutions that contain the limited amount of sulphate of soda. The writer's method will prevent the presence of an excess of Sodium Sulphate.

The amount of mud obtained in the above operation was about 20% of the bulk usually obtained. An analysis of the dried mud, and that of a sample taken in June follow:

Preventing Excess Sulphate of Soda	Copper	Nickel	Iron
Only Small Amount of Nickel Lost in "Iron Mud"	21.22%	16.9%	8.5%
	Writer's Method: 1.6%	Present Method: 26.0%	1.64%

From this it will be seen that the ratio of removed impurities to nickel lost is much more efficient in the writer's method;

Ratio of Lost Nickel and Impurities Removed

Present Method;	NI/Impurities	7.96
Writer's Method	NI/Impurities	0.63

This means that the method is over twelve (12) times as efficient as concerns the removal of copper and iron at this step.

Too much emphasis cannot be placed on the importance of avoiding loss of nickel.

Resume

Steps in Writer's Process

1. Dissolve carbonate to neutral solution.
2. Filter to iron purifying tank.
3. Boil carefully; add soda ash.*
4. Pump to storage tank.

*A small amount of bleach can be added as a precaution to oxidize any small amount of ferrous iron that may be present.

Steps in Present Process

1. Dissolve carbonate.
2. Add nickel fines to remove copper.
3. Neutralize with Na_2CO_3 .
4. Siphon to settling tank; settle 4 hrs.
5. Acidify (40 lbs. H_2SO_4).
6. Siphon to iron purifying tank.
7. Oxidize with bleach.
8. Boil and add NaOH .
9. Add Na_2CO_3 to remove copper.
10. Pump to storage tank.

Conclusions

1. Nickel sulphate can be purified in about one-half the present number of steps.
2. The production in 20 hrs. can be increased about 68.2%, or 54.6% in 16 hrs.
3. No great increase in apparatus is needed. We shall not need all the present apparatus.
4. About one-third ($1/3$) of the present quantity of soda ash will be required.
5. The flow sheet time can be cut from 14 hrs. 25 min. to about 4 hrs. 35 min. or to the extent of 68.2%.
6. The amount of soda ash used to remove copper, being small, the amount of mud must necessarily be small, thus saving labor of removal and space for collecting same.
7. The use of bleaching powder can be practically eliminated.
8. The separation of copper and iron from nickel by the writer's method is quicker, more efficient (12 times) and less expensive than the present method.

A supplementary report #2 will follow giving recommendations for simplifying of apparatus and also detailed directions for carrying out the process outlined above.

F. W. Smith



8-19-20

Mr. Edison

Herby gave me an outline of new process for purifying nickel plating solution, which we will try out on a commercial scale so that we can report results to you.

In connection with this and other developments in this process, we do not think it advisable to proceed too rapidly at this critical time, at least until any improvements have been thoroly tried out, as any hold up will seriously affect production.

Osair

[AUGUST 1920]

Aluminum Type Thin

Plates, pressure 300 lbs per sq. inch

Dried 2 hours at 400° Fahr

Start furnace for final bake Cold & loaded with plates raise temperature until 1400° Fahr is reached, hold at this temperature 5 hours
Cool off.

Porosity 7%.

Plates contain at start

239 grms CuO 180 mesh sh.

21 " Semi dehydrated Sulphate Copper

16 cc 20% Caustic Soda

weight baked plate 260 grams

We have built a mixer that will mix your whole product. 25 lbs a minute —

4 plates to a cell $\frac{1}{4}$ inch thick 2 $\frac{3}{8}$ x 3 $\frac{7}{8}$

5 Zinc

~~Sent to R. M. The Chemist~~

[ATTACHMENT]

Plates - pressure 300 lbs. per square inch

Dried 2 hours at 400° Fahr.

Start furnace for final bake cold and loaded with plates.
Raise temperature until 1400° Fahr. is reached. Hold at this
temperature 6 hours. Cool off.

Porosity 7%.

Plates contain at start:

239 grms CuO 180 mesh S L
2 " Semi Anhydrous Sulphate Copper
16 cc 20% Caustic Soda

Weight baked plate 260 grams.

We have built a mixer that will mix your whole product. 25
pounds a minute.

4 plates to a cell 1/4 inch thick 2-3/8 X 2-7/8
5 Zincs.

[ATTACHMENT]

Heated at 400 °F for 2 hours

Start Furnace Cold loaded with
Plates gradually raise Temp until
it reaches 1400 °F remove plates
to Boile at this Temp. for 3 hours

Cooling Furnace 5 hours

Pressure on Plates 300 lbs per sq"

Porosity 7.7%

Plates contg.

239 gms. CuO (180 mesh S.L.)

21 " 40% Copper Sulphate

16 CC H₂O at 20%

4 Plates to 1 Cell

1/4" thick

2 3/8" x 3 1/8" size of plate

5 Cast Zinco in Cell

3 cast Zinco's weighting 416 gms
inside

2 Cast Zinco's weighting 245 gms
outside

VIEW of CELL

COO PLATE



[ATTACHMENT]

8/5/70
#5436597

300 lb. Pressure

One Cell

Porosity 7.7%

Reg. S. Lake

4 Cell Cell

VOLTS	Amp Hrs	VOLTS
62	51	63
59	123	61
57	267	59
54	339	56
54	411	55
52	483	53
50	555	50
49	561	45
Out →		

Expt. performed to determine Sept. 9/20
amount of CuSO_4 that can be recovered
from spent electrolytes.

The solution used over from Bkly 24
and assayed

	Sp. Gr.	
$\text{CuSO}_4 + 5\text{H}_2\text{O}$	1.203	220.17 grams per litre
$\text{NiSO}_4 + 7\text{H}_2\text{O}$		81.95 " " "
free H_2SO_4		43.07 " " "

Bailed down in porcelain dish, & crystallizing point — Transferred to Buchner funnel and drained with suction but did not wash

Product

	Crystals	M. Liquid
Amount	111. grams	100 cc.
Sp. Gr.	—	1.3834
from H_2SO_4	1.71 %	196.77 gms/l.
$\text{CuSO}_4 + 5\text{H}_2\text{O}$	88.07 %	119.66 " "
$\text{NiSO}_4 + 7\text{H}_2\text{O}$	4.86 %	329.47 " "
Fe_2O_3	0.16 %	39.8 " "
= {	Cu (22.41 %)	(30.47 " ")
	Ni (1.02)	(68.85 " ")
Ratio Cu to Ni is	100 : 4.55	100 : 225.96

(2)

Calculating from assay and weights
and volumes obtained, we find the following
Totals, and separation percentages.

	<u>Crystals</u>	<u>M. liquor</u>	<u>Total</u>
free H_2SO_4	1.91 gram +	16.98 gram =	18.89 gm
$CaSO_4 + 5H_2O$	97.69 " +	11.97 " =	109.66 "
$MgSO_4 + 7H_2O$	5.39 " +	32.95 " =	38.34 "
Fe_2O_3	0.18 " +	0.40 " =	0.58 "

Showing the following percentages and
where recovered:—

	<u>Crystals</u>	<u>M. liquor</u>
free H_2SO_4	10.11 %	89.89 %
$CaSO_4 + 5H_2O$	89.02 %	10.97 %
$MgSO_4 + 7H_2O$	14.06 %	85.94 %
Fe_2O_3	31.03 %	68.97 %

E. B. R. R. R.

Fines, " Hold - Disposition advise.

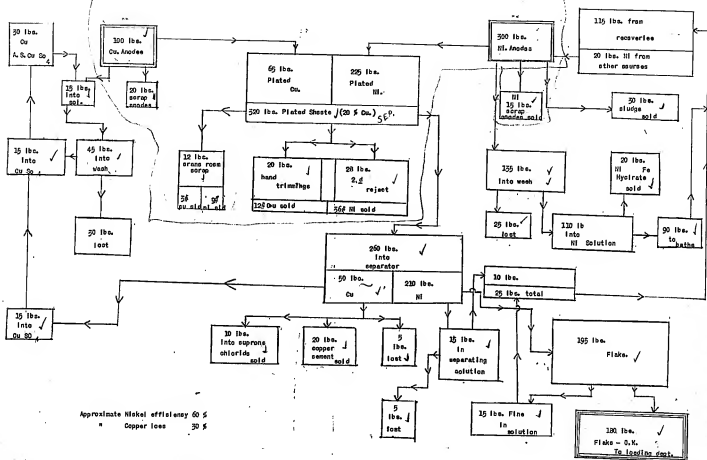
Note:- Scrap of Heavies, small as this is kept being put through process.

Reports: Attached are copies of forms Exhibit # 1 & 2 daily and weekly, recently made up and now being made out. These are good but submit the attached Exhibit #3 as a report for this Department. Mr. Donohue also keeps personal figures of his own.

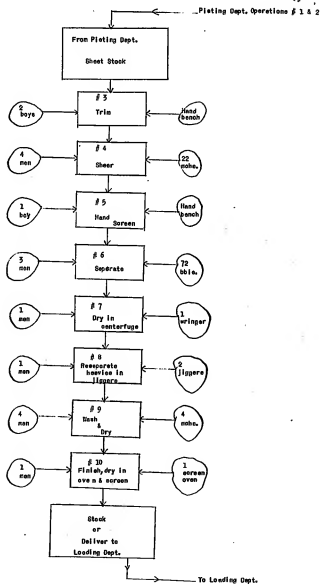
G. E. Lamb,

Sept. 18, 1920.

APPROXIMATE ESTIMATION OF PAPER 1 NUMBER 12 PLANT WFL PRODS.



EDISON STORAGE BATTERY CO.
Pinto Refining Dept.
Operations.



Oct. 11/20

Treatment of Copper Carbonate

Mr. Edison: - I have not finished the analysis of "great Sample" of 100 Tons Copper Carbonate at Bldg. 11 & Silver Lake, but an examination of the stones let ~~stones~~ leads me to believe that it is quite high in Nickel, contains some Nickel fluxes and is very dirty. — Two large steel tanks are brimming full, and the rest is in old iron drums, and also a pile on floor.

There are plenty of crystallizing tanks so that we can afford to give priority of time to the crystallization, therefore making a larger and more satisfactory crystal. — There is a lead-lined cylindrical tank up near the roof, which if lowered to floor would make a good dissolving tank. — On account of foreign matter, dirt etc. in the Cu Carbonate, and its nature, I feel sure a filter press is absolutely necessary. There is a press available and we also have wooden plates & frames which we discarded at the Nickel Refining plant, which would be satisfactory for this purpose. — We also have shallow square tanks fitted with coils for concentrating the m-liquor. A filter press would also make possible the recovery of Copper Oxide from sweepings etc.

(-2)

and various other Reclamation projects.

I respectfully submit the following scheme for your approval.

1st Step Dissolve the carbonate in Sulph. Acid in round tank, making as strong a soln. as possible also neutral, and removing Limon if necessary.

2nd Step Pass through filter press to crystallize pans. Crystals to drain board before packing in barrels.

3rd Step M-Lignin concentrated in tanks filled with coils. Crystals to be added to the 1st crop. - 2nd M-Lignin to be transferred to Nickel Recovery Plant, or boiled down, crystallized, and mixed Copper & Nickel Sulphate pans fed to Nickel Recovery Dept. for treatment. The final M-Lignin tank to discontinue.

Note Another reason for installing filter press in this Bldg is - We are accumulating a fine cake in Nickel Dept. which is high Copper, and it will have to be eventually treated as a Copper proposition.

Dougherty

Report on Recovery Jan. 31/21
and utilization of Cu. Cl₂
assuming that Basic Copper Sulphate mud
from Fluke Separation is its only source.

I obtained some of the actual mud from
Storage Battery Dept. for this research, which
analyzed as follows:—

	Mantle	63.60 g
	Total Ni	1.41 %
	" Cu	19.18 "
	Metallic Ni	0.27 "
	Ni sol. in dil. H ₂ SO ₄	1.16 "
	Total Cl	2.34 "
	Chlorine sol. in dil H ₂ SO ₄	21.0 "
	" insol. " CaO "	21.2 "
		52.68 "
Wet		
Basic	Cu. Cl ₂ wet from Cake contains all the fluke and not 40% Moist. by actual exper.	73.7 %

Note The above shows quite conclusively
that this material cannot be considered as a
source of Cu. Cl₂. — The small amount of
Metallic Nickel will go into solution upon the
addition of slight excess of H₂SO₄, and boiling, but
it has little reducing power, and will not
produce additional Cu. Cl₂. — The reason
for this is — the soluble chloride is not
Cupric Chloride, but Nickel Chloride
principally, and as the affinity of Chlorine

is much greater for Nickel than for Copper.
it would be a long tedious process to
convert and eliminate the Chlorine as
Cuprous Chloride.

Diluting in the presence of free H_2SO_4 and
excess Metallic Copper would in time convert
the Nickel Chloride to Sulphate, and the
Chlorine to insol. Cuprous Chloride which
could in turn be filtered off, but it would
take time and considerable steam.

The method of eliminating the Chlorine,
and utilizing the Metallic Nickel that may be
in original Basic Copper Sulphate, and which
is herewith submitted for your approval or
consideration, is, I believe about as easy
as any we could think of.

The Basic Sulphate as it comes from separating
operation, and arranging as above is dissolved
in lead-lined tank with stirring, using slight
excess H_2SO_4 . — What Cuprous Chloride may
be present is left in the insol. material,
along with Metallic Nickel. Most of it will
settle out, but it would be best to pass
through a small filter of coarse sand, directly
to lead-lined Crystallizing pans, where tank of
the Copper is recovered as B.V. x tals.

About 91% of the Chlorine passes directly
to the B.V. Crystallizing tank, but can do no harm
for the following reasons:—

(3)

1st " No Crystals can be formed, as no metallic Cu or Ni is present

2nd " As bulk of Chlorine is present as Nickel Chloride it will stay in sol. in the M-Liquor as no amount of its high solubility.

100	parts	H ₂ O @ 0°C	will dissolve	179	parts	NiCl ₂ ·6H ₂ O
"	"	" @ 100°C	"	"	599	"
100	"	" @ 0°C	"	"	110	" CuCl ₂ + 2H ₂ O
"	"	" @ 100°C	"	"	192	"
100	"	" @ 0°C	"	"	316	" CuCl ₂ + 5H ₂ O
"	"	" @ 100°C	"	"	203	"

In my experiment, without attempting to wash the separated crystals, I found 88% of the Cl in the B.V. M-Liquor.

	<u>Cu</u>	<u>Ni</u>	<u>Cl</u>
1 st Crap B.V.	80.13%	17.54%	3.00
1 st M. Lig	18.04%	63.31%	88.00

Note As no attempt was made to wash or centrifuge these crystals, there is no doubt but Ni and Cl were retained in the interstices of the crystals, and could be easily removed by spraying while centrifuging up, with small quantity of water. — You will notice also that the proportion of Ni to Cl in the B.V. X tails has changed. — This is probably due to fact that X tailing took place in excess of H₂O₂ so that Nickel must be present as sulphate and Cl probably as free HCl.

(4)
The M-Liq. from 1st crop of B.V.
arranged as follows

Sp. Gr.	1.25	Room temp.
For acid equiv. to H ₂ SO ₄	21.75	grams per liter
Cl	85.24	" " "
Mn	22.00	" " "
Cl	50.09	" " "

This M-Liquid could be used in diluting next batch of acidified Basic Sulfate before crystallization. — Or, it might be allowed to accumulate, when it could be concentrated and a 2nd crop of B.V. recovered. — The M-Liquid which now contains practically all of the Cl, and which is small in total volume, may mixed with clean third floor wash water in sump where upon precipitation of metal, the Chlorine goes to waste, as has in ~~the~~ ^{the} sump. — For floor and from liquid.

Better still, we will assume that we can obtain a B.V. x² on 2nd crystallization which after washing & drying in centrifuge will be fit for use, and we will obtain a 2nd M-Liq. which will carry 20% of the Copper 98% of the Nickel 99% of the free acid and also 95% of the Chlorine, making all necessary calculations we will obtain a final M-Liquid which will look about as follows:—

(5)

Cu	:-	42.26	grams per liter
Ni	:-	53.90	" " "
Cl	:-	159.00	" " "
free acid as H_2SO_4	:-	53.30	" " "

This 2nd M-Liquor could go to tank where Copper Mixed Copper & Nickel Carbonates from pumps are dissolved, when Cu is thrown out with corresponding solution of Nickel, and the original Ni and Cl stay in sol. in this Cu free Nickel sol. which is used directly for plating after pumping to supply - tank.

If a solution assaying 30. gms Ni per L is being used, this arrangement will also introduce into the circulation, an equivalent amount of 0.013 gms Cl per liter.

Note They have used lower at Battery Dept as high as 3.0 gms Cl per liter when Ni ran 30.0 gms per liter.

The small amt. of Cu, Cl₂ which accumulates along with the very fine metallic Nickel is to be put in a stone-vase crock, with excess Sulph. acid and smallest quantity possible of HNO_3 as oxidizing agent, when it is ~~taken up by~~ a mixture of Sulphate of Nickel & Copper, free H_2SO_4 and free HCl is formed. — This sol can go to tank where Mixed Copper & Ni Carbonates are dissolved, to be used same as Sulph. acid,

(6)

In the old practice they figure on a production of 3000 * per Mo. of Cuprous Chloride process, whereas I can account for only about 18 1/2 lbs per day or 555 * per Mo.

We may account for this partly from the fact they also accumulate a great deal of Gypsum in their Ck, whereas I did not find any Gypsum. — also at the very beginning I separate immediately 91% of the Cl from the Metaller Nickel, where there is no possibility of its subsequence conversion into Cu Cl; — They did not do this; but kept the Metal in contact with the Cl and resorted to considerable boiling whereas I worked at Room Temp. then again they used to produce considerable Cement Copper, and it would not take much of an accidental admixture of Cement Copper to bring up production of Cu Cl. They have, in the past run their Flue-work which assays about 3 Cu to 1 Ni and also free HCl to separate Tank where it was neutralized with Na₂CO₃ allowed to settle, filter-pressed and after dissolving in H₂SO₄ used as a source of Blue Vitriol. I have not considered this at all, but it cannot more than double the amt. of Cu Cl I have found.

(7)

The volumes involved are small and are as follows:— 2000 A4 cells per day capacity

	<u>Cu.</u>	<u>%</u>	<u>Large Scale</u>
Orig Basic Copper Sulphate from Separators	3250 gms	100	79.4 *
Vol. of above	2550 cc	"	95 cu ft
After adding 366 cc H ₂ O	2916 "	114.32	10.86 "
Before Crystallization	2916 "	"	" "
1st Batch B.V. Crystals	1516 "	57.45	5.65 "
1st " " M. Lg.	1400 "	40.55	3.55 "
Net Press Cake of Cu. Cl ₂ containing 7% H ₂ O	80 gms	2.32	18.42 *
Sp. Gr. of press cake 1.914			

1 cu ft. Cu. Cl₂ press cake = 119.43 *

30 days accumulation = 553. *

or 4 6/10 Cu. ft.

Dissolving Tank

Round, lead-lined 4' dia x 4' deep mill tank
Care of 4 days production

Crystallizing Tank

Square lead-lined Tank 6' x 6' x 1 1/2'

will take care of 4 days production

Filtration Apparatus

Will have to be decided upon.

Decanting Tank for Cu. Cl₂

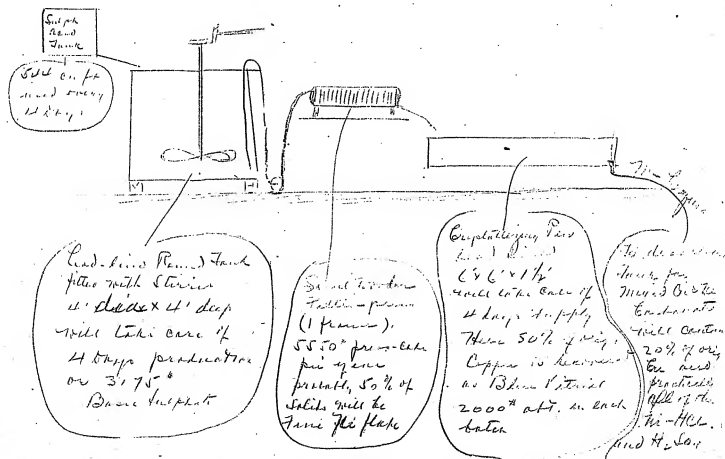
Stone ware crock 1' dia x 1' deep, tubulation at top
will take care of 5 days production

Practically all apparatus necessary
is already on hand and available
but filtering arrangement and
Stomach Crack.

	Ratios	Ni	Cu	
Orig. Basic Cu Sulphate	1.	"	16.07	
1st Strong Solution	1.	"	16.52	
1st Exp. B.V. Crystals	1.	"	62.20	← not washed or drained
1st B.V. M.L.	1.	"	3.87	
Drunk. in dilute H_2SO_4	1.	"	1.29	
2nd B.V. M.L. which may be used for dissolving dry Ni-Cu Carbonate	1.	"	0.784	

DE Humphrey
4

Recovery to 100% of product of the process
 given. Should be present



E. E. Dwyer

Flux - Sheet

1/20/21

Nitration of Basic Copper Sulphate Pkt.

Basic Copper Sulphate + H_2SO_4

Boiling Tank + Filter

$CuSO_4 + 7H_2SO_4 + H_2SO_4 + HCl$

Solution (98.17%)

$CuCl_2 + 7H_2SO_4$

Insol. (1.83%)

Boiling Tank

Small Boiling

1st B.Y. Xals

80% of this Cu

1st M-Lignin

$CuCl_2 + 7H_2SO_4 + HCl$

Boiling Tank + Filter

2nd B.Y. Xals

2nd M-Lignin

$CuSO_4 + 7H_2SO_4 + HCl + HCl$

$CuSO_4 + 7H_2SO_4 + HCl + HCl$

Boiling Tank for Mixed Carbonate

Ed. Hughes

88
Mr. Edison:

I wish to report herewith results of my investigation of the inspection
Department of the Storage Battery.

After the recent cuts in the personnel of this dept. the remaining number
is 54 disposed as follows:

Chief Inspector	-----	1
Tube Load & tube assembly	-----	2
Tube inspection	-----	14 { 3 men - 11 women)
Tube & pocket	-----	2
Iron Load	-----	4
Cell assembly	-----	1
Mine Lamp	-----	1
Screw machine	-----	4
Punch press	-----	2
Shipping Dept.	-----	1
Rubber goods	-----	1
Parts plating	-----	1
		<u>54</u>

An examination of these figures shows 18 of the 53 actual inspectors
working on the positive tube from the ribbon stock through operations to the completed
positive plate. In other words, 55% of the entire Battery inspection is on the
positive elements alone. This may seem at first to be an excessive percentage to
be working on one particular part but if this is considered from a trouble making
point of view, when the cell gets into service, the positive tube comes pretty near
being the whole Edison cell. If the positive plates in a cell leaving the plant
are all right, the cell should give no trouble. For this reason I regard a thorough
inspection on the positive tubes absolutely the cheapest thing by many thousands of
dollars.

Taking up the inspection, department by department, follows:

1. Chief Inspector - - Mr. Abrams.

His duties consist of supervision of the entire department, keeping
close check on product from verbal and written reports, and if he discovers things
are going wrong to have them corrected at once.

2. Tube and pocket dept. - - 2 men.

Conroy - Reels pocket stock, at same time inspects by light test to
catch perforations plated over. This operation also removes rivets which could not
be passed through pocket forming presses. He also inspects the product coming from
tube drawing and grinding operations - taking micrometer readings on stock running
through the grinding operation, and gauging up tubes. He handles the physical tests
on plated tube stock. This consists of elongation, ductility, and scleroscope
tests. Report on every reel of tube stock sent to tube drawing machines is kept
and sent to chief inspector.

Free - Inspects tube stock before and after plating. Reels tube
stock, at same time inspecting plating and removing rivets. When his work for the
day is finished he helps Conroy to get his work cleaned up.

Both of these men are essential in my opinion.

3. Tube load and tube assembly - - 2 men.

Conkling - In charge of floor inspection in tube load and tube assembly
departments. Also handles all tubes sent over to research dept. for electrical tests.
Weighs up 40 empty tubes a day in groups of eight which are sent up to floor inspectors
in the plant to be processed on different machines and the dumps of slake and hydrate.

Special
July 29, 1921. Investigation
FILE COPY

counted. Conking then puts these tubes through operations, after weighing them and report with data is sent to foremen of tube load and research depts. Five selected tubes are sent over for electrical tests. Conking also runs the microscope test on 12 or more sawed tubes for a count of layers of hydrate and flake and also to see if layers of flake run completely across the tube making an electrical contact with both sides. Periodic flake readings are also made and report of this is sent to chief inspector. His floor inspecting consists of watching product in various operations of tube assembly dept. to catch bad work at the start.

Wesbacher -- Floor inspector in tube load. Watches product coming from loading machines. Handles loading, counting or dumps of all tubes going to research dept. and tubes for microscope test. When he sees something going wrong with loading machines he notifies the machine mechanic to have it fixed immediately. He watches empty tubes before loading to see tubes are coming right. Assists and works under direction of Conking.

I regard the work both of these men as an important and necessary one not only because they are a check on bad work but because of the work on testing tubes and preparing tubes for research -- a most necessary function.

4. Tube inspection dept. -- 11 women, 3 men.

This department is the largest inspection group in the Battery and to my mind is the kernel of the whole inspection system. Hence I have spent more time in studying this than all the rest put together.

I give first the flow of tubes from the drawing to the finished positive plate and then take up the inspection step by step.

- | | | |
|--------------|--------------|-----------------------|
| 1. Tube draw | 7. Inspect | 13. Trim |
| 2. Burr end. | 8. Cap | 14. Inspect |
| 3. Inspect | 9. Inspect | 15. Assemble in grids |
| 4. Load | 10. Graphite | 16. Inspect |
| 5. Inspect | 11. Ring | 17. Press |
| 6. Beam | 12. Close | 18. Inspect |

Empty tubes after the burr and operation pass to a group of three women. They inspect for long and short tubes, loose and tight tubes, high seams, jumped perforations and closed perforations. Tubes are then counted by the box and traveler tickets made out. This inspection cannot be a 100% inspection on each individual tube because there is not the time. It is enough of an inspection to catch too much bad stuff getting up to the loading machines.

It is perfectly possible to lay off one or more of these women, but to my mind it would be poor economy. Suppose the inspection on these empty tubes is allowed to slack up. When the periodic case of tight tubes appears a considerable quantity will get by inspection. For these bad tubes the tube drawing operators will be paid. The tubes come up to loading machines and a lot of trouble arises. There would be an excessive waste of hydrate and flake due to sticking tamps and loading a tube part way only to be rejected. The tube load operators also have to be paid -- it wasn't their fault the tubes were tight.

These three women are drawing a combined pay of less than \$10 per day and it does not take a great deal of hydrate and flake going into bad tubes to go away over that sum.

After these empty tubes are inspected they are taken up and are loaded. The loaded tubes come back and are inspected by two women. These two women are most expert in detecting the various tube diseases because in all of this laying off only the best were retained. These women inspect from 30,000 to 35,000 tubes a day apiece and catch the following defects: soft tubes, green tubes, mixed tubes, broken ends, caps missing. If these defects are not caught there they get a lot more operations put on them -- which adds to the cost. These women also count the tubes coming down and the tube load operators are paid only for the good tubes they turn out.

Tubes are then reamed and inspected on the floor at the machines, by one man -- Paul. He goes over a box at a time rejecting those that are reamed too

deep or not deep enough. He also rejects tubes with ends broken in reaming. He credits the traveler ticket for number of good tubes. Rejects on tubes that are not reamed deep enough go back to reaming operators.

Next operation is capping. After capping, inspector (same man as above - Paul) examines tubes for capping rejects. Rejects due to deep and high caps, inverted caps, broken ends, are set aside and the number of good tubes entered on the traveler.

This inspector is usually never more than an hour behind the operators and is a quick check on operations going wrong.

I thought at first a woman could do this work but do not think it would work out very well to have a woman working in around machine operators. If work had to be carried to her it would slow up production because there is no one to carry the boxes of work except the operators themselves.

The good tubes then go through successively the following operations - graphiting, ringing, closing ends, and trimming. Three women inspect all of the tubes for the last three operations. They take a double handful of tubes, examine the ends on one side for closing and trimming rejects, reverse the tubes and examine the bottoms - the tubes are then examined for proper number of rings.

Good tubes pass to two women at the opposite side of bench and are assembled in grids. These two women are on piece rate and are not in the inspection dept. These women assemble about 1000 plates each per day.

All assembled plates are then inspected by one woman. She catches anything missed by the others and also repairs tubes that have the rings improperly spaced. This work could not be done after pressing without prying the tube out of the grid.

I have an idea on the above that I think is worth consideration and trying out: Why not inspect and assemble at the same time? The woman would take a small handful of lefts (about 16) in the left hand and about the same number of rights in the right hand, bring the hands close together and examine the tops for closing and trimming defects. Then turn the wrists and examine the bottoms for the same thing. After that as the tubes are assembled in the grids inspect for rings.

I think this could be worked out so a woman can inspect and assemble in this way 500 plates per day (that is about 1 minute per grid). On the basis of 500 cells per day or 2000 positive plates per day four women can do the work five are doing now. If it can be worked out so 670 plates per day are assembled ---three women can do the work.

The plates thus assembled and inspected would pass to the woman inspecting as at present.

The next operation is pressing the plates. An inspector (man-Frazzano) sits right at the press and examines plates as they come from the press. He cannot quite keep up with hydraulic press but just manages to get the 2000 pressed plates inspected in a day. He catches chiefly rejects caused by the press - i.e. tubes broken at one end. He is a quick check on the press going wrong and turning out bad work-which happens once in awhile. I regard this inspection as absolutely necessary.

In addition to the above mentioned inspectors there are three more in this department. One woman inspects all rejects. Every reject from all the operations comes to her and are sorted. Tubes that are so badly broken that they cannot be used are set in one lot to be cut up to reclaim the hydrate and flake - tubes that have broken ends and can be saved for W tubes are set in another lot and tubes that can be repaired and used in the large grids are also set aside. This arrangement saves money.

One man (Caruso) issues empty tubes to the loading operators after seeing that the boxes contain the right number. If the loading operator has trouble with them it is sometimes necessary to exchange them for new tubes. He keeps check on number of tubes each operator draws out and when the loaded tubes are returned at the end of the day work credits the operator with the number returned. The loading operators, however, are paid only for the good tubes they produce. This man also does trucking, sweeping, and odd jobs.

One woman inspects all M tubes before they are assembled in grids for all causes of rejection. The M grids are then pressed and come back to her for an inspection of assembled M plate. Rejects on this inspection require sawing up of the plate and discarding the bad tube, the good tubes are used over again. She also inspects all W plates.

This inspection department is supervised by foreman (Stimm) who also is in charge of the production dept. of tube assembly. I don't quite like the idea of a man making something and then turning around and inspecting what he has made and submitting reports to the chief inspector. I believe inspection should be separate from production. However, in the interests of economy this arrangement has to be done.

On the whole this tube inspection is efficient. It catches bad work. The positive plates that are leaving this factory now are right. It is perfectly possible to lay off part or the entire outfit. It would not hurt production because they are not producing anything, but I cannot see it in that light. This dept. is out to the bone and just enough are left to catch bad work. If more are laid off bad tubes are going to start going out -- that means trouble and money. I regard this tube inspection as the cheapest form of insurance it is possible to get.

It would be perfectly possible to work out some system whereby tubes are not inspected until the plates come from the press. Bad stuff is bound to get by this way, however, and furthermore there is no check on machine operators, workmen will be paid for bad work, and a lot of grids will be spoiled because grid fingers will be broken due to the necessity of removing several tubes from each plate -- a costly arrangement to say the least.

The note from Mr. Altengarten instructing me to investigate the inspection dept. ends up by saying -- "without impairing the ultimate product". I cannot honestly recommend any such arrangement because I am sure the ultimate product will be impaired.

The rest of the factory inspection can be covered at less length. I think it is all right, with one exception. It consists on the most part of single inspectors scattered around in different departments, who are juggled around from department to department like a lot of hot potatoes.

5. Iron load -- 4 men. Thomas in charge.

There are really 3 men working in this dept. plus the services of one other only several hours a day. Thomas, gang leader, who usually is in charge of work has been put down in shipping dept. inspecting because the shipping inspector is on vacation. Three men inspect carefully all negative plates after being pressed in hydraulic presses. They reject pockets that are soft, loose in the grid, ends not filled with oxide and also do repair work on pockets that have edges bent over. Three men can just about do this work. Grids with the present production would not be properly inspected with only two men.

Repeating work on pockets is done now by the mine lamp inspector, who spends an hour or more a day on this work. Thomas gets up a little while each day from shipping dept. to see work is going properly.

6. Cell assembly -- 1 man (Lawson).

Tests cells for leakage in compressed air testing machines. This takes most of his time. Rejects on this test go back to welders to be repaired. Also inspects and checks count of covers. Inspects suspension bosses for imperfect welding, cells after coming back from plating, and inspects assembled cells. He is assisted a couple of hours a day by the rubber inspector who comes over from his rubber job in building plant and helps out on cell testing.

I have a suggestion to make on this cell testing. I have noticed when some of the large size cells are taken from the testing machines a considerable quantity of water has worked in in some way. I cannot see how it is possible to get an efficient

leak test if the can has a quantity of water in it. Would suggest these machines be gone over to prevent this.

7. Mine lamp - - 1 man (Dockett) ^{Many}
Inspects all mine lamp parts - of which require a 100% inspection. Weighs up or counts parts as a credit for piece rate operators. Inspects hinge bands of large cell cover group. In addition to this spends part of the day weighing pockets to see loading weights are running properly.

8. Parts inspection - - screw machine. 4 men (Harrison in charge)
One man does the floor inspection. He covers the product coming from all the automatics, hand operated machines and grinders, putting a microscope or gauge on this work. This is an excellent check on the machine and saves the waste that would be caused by an improperly adjusted machine turning out a lot of bad work. If he finds something wrong he stops the machine and has operator correct it. I think this man saves his pay many times over.

All screw machine parts after oil and turnings are removed then come into parts inspection dept. Where they are given a thorough inspection, much of the work getting a 100% inspection. Poles and connecting lugs have to be gauged and the grinding work examined on each pole. They also inspect connecting rods, spacing washers, valve and stuffing boxes, and mine lamp or audion cell parts. They also have to weigh up or count parts as a credit to piece rate operators and keep a report of amount produced and rejects for each part. They do all trucking of parts from screw machine dept. over to parts plating. Three men is not any to many to handle this work properly.

Some day perhaps, it will be feasible to have women doing this work, but it would not be practicable to make this change now. In the first place it would be expensive breaking in new help and furthermore women cannot do the heavy work of lifting large boxes full of steel parts and the trucking these men have to do.

9. Punch press - - 2 men.
These two men handle the inspection of all work turned out in punch press dept. Much of the stuff has to have a 100% inspection. Some drawing operations result in splits in the metal which are caught here. They also inspect grids, can sides, mine lamp parts and weigh or count as a credit for piece rate operators.

10. Shipping dept. - - 1 man (Gifford)
The regular inspector, Gifford, is on vacation and work is done by Thomas from the iron load. His work is to inspect all cells, and apparatus before it is shipped - - a most necessary function. He checks all charged cells for capacity, see connectors are properly adjusted, and that battery is made up properly. Checks all W lamp parts, all shipments of positive or negative plates, and inspects filler outfits to see that they work properly. He has to O.K. the shipping order before shipments can leave the plant. Part of his time is spent in iron load.

11. Rubber inspector - - 1 man

This man is not only an inspector but is also store keeper of all rubber goods. He sends in a written report weekly on the number of different rubber parts. These rubber goods have to be looked over carefully. Grid separators for example sometimes have clogged up grooves so it would be impossible to fit in the negative grid edge. If the groove can be cleared out it is done by this inspector (incidentally time required to repair such a part is charged up to the manufacturer-the Spokes rubber Co) and if the part cannot be repaired here it is sent back to the manufacturer. Several hours a day he is called over to cell assembly dept. to test cell cans for leaks.

12. Parts plating - - 1 man.

Inspects all plating for evenly plating, black spots, rust, etc.

Such parts as grids are given a very thorough inspection. He also inspects annealing operations. This man cannot cover all the work required of him in a days time so is helped out for an hour or so a day by the clerk of the parts plating dept.

In summing up this section of the inspection dept. (everything outside of the tube inspection) it would seem possible to cut out one man. At present with one man out on vacation they are able to just about get along with a lot of shifting and juggling about of inspectors. It is possible to make any number of combinations whereby one man is eliminated if they are all here. Here is one that would work, I think. Lay off the regular shipping inspector and keep Thomas of the iron load on that work. Thomas has done this inspecting before and knows this work. He gets time to get back to the iron load for an hour or two to help out there.

On the whole I cannot see that the Battery inspection dept. has an excessive personnel with the present production of 500 A4 equivalents per day. Product is coming along in excellent shape now and should be kept that way. I do not know of any other way to keep things going out in good shape than proper inspection of parts. Slackening up of inspection invites slackening up on the part of everyone, trouble on the outside, loss of business and loss of money.

CWB

I agree with this

Sent note to Bissell on looking
after machinery to make the parts, etc. perfect
& not to need so much inspecting them.
Bissell to look into this feature

W. H. B.

January 12, 1922.

From : D. S. Sargent, Cell Test Dept.,

To : Mr. J. F. Monahan,

Subject: Capacities delivered by 119 Rejuvenated 14 Cells.

	Ampere	Hours	120	135	150	152.5	155	157.5	160	165-
1-4-'22 Run #1	7 hr. chg.	1	17		6	17	78			
1-5-'22 Run #2	7 hr. chg.	4	13		12			34		56
1-6-'22 Run #3	7 hr. chg.	2	20		26			61		10
1-9-'22 Run #4	7 hr. chg.		10		13		17		35	44
1-10-'22 Run #5	7 hr. chg.	7	36		41		35			
1-11-'22 Run #6	7 hr. chg.	5	38		39		37			
1-12-'22 Run #7	7 hr. chg.	2	20		7		19		71	

D. S. Sargent,
2nd. Floor Test.

Jan 13 '22

119) 970 (816
 930

 40
 1190

 1190

 0

January 13, 1922.

From : D. S. Sargent, Cell Test Dept.,

To : Mr. J. F. Monahan,

Subject: Capacities delivered by 119 Rejuvenated A4 Cells.

			Ampere Hours	120	135	150	152.5	155	157.5	160	165 ¹
1-4-'22	Run #1	7 Hr.Chg.	1	17	6	17	78				104
1-5-'22	Run #2	7 Hr.Chg.	4	13	12			34		56	101
1-6-'22	Run #3	7 Hr.Chg.	2	20	26			61		10	97
1-9-'22	Run #4	7 Hr.Chg.		10	13		17		35	44	109
1-10-'22	Run #5	7 Hr.Chg.	7	36	41		35				76
1-11-'22	Run #6	7 Hr.Chg.	5	38	39		37				76
1-12-'22	Run #7	7 Hr.Chg.	2	20	7		19		71		97
1-13-'22	Run #8	7 Hr.Chg.	5	22	22		51			19	92

D. S. Sargent,
Encl. Floor Test.

January 17, 1922.

From : D.S. Sargent, Cell Test Dept.,

To : Mr. J. F. Monahan,

Subject: Capacities delivered by 115 Rejuvenated A4 Cells.

		Ampere Hours	120	135	150	152.5	155	157.5	160	165	Total at base 150 Amp Hr
1-4-'22	Run #1	7 Hr Chg.	1	17	.6	17	78				101
1-5-'22	Run #2	7 Hr Chg.	4	13	12		34		56		102
1-6-'22	Run #3	7 Hr Chg.	2	20	26		61		10		97
1-9-'22	Run #4	7 Hr Chg.		10	13		17		35	44	109
1-10-'22	Run #5	7 Hr Chg.	7	36	41		35				76
1-11-'22	Run #6	7 Hr Chg.	5	38	39		37				76
1-12-'22	Run #7	7 Hr Chg.	2	20	7		19		71		97
1-13-'22	Run #8	7 Hr Chg.	5	22	22		51		19		92
1-16-'22	Run #9	7 Hr Chg.	2	16	16		32		38	15	101
1-17-'22	Run #10	7 Hr Chg.	0	15	13		30		51		104

These two are new runs

Not seen by you before.

Haa

D. S. Sargent,
2nd Floor Test.

8790
gmd

*Why make out a new sheet
Every run. Why not add each run
end of a sheet*

January 18, 1922.

From : D. S. Sargent, Cell Test Dept. .

To : Mr. J. F. Monahan,

Subject: Capacities delivered by 119 Rejuvenated A4 Cells.

		Ampere	Hours	120	135	150	162.5	155	157.5	160	165	Total Above 150 Amp. Hr.
1-4-'22	Run #1 7 Hr Chg.	1	17			6	17	78				101
1-5-'22	Run #2 7 Hr Chg.	4	13			13		34		56		102
1-6-'22	Run #3 7 Hr Chg.	2	20			26		61		10		97
1-9-'22	Run #4 7 Hr Chg.		10			13		17		35	44	109
1-10-'22	Run #5 7 Hr Chg.	7	36			41		35				76
1-11-'22	Run #6 7 Hr Chg.	5	38			39		37				76
1-12-'22	Run #7 7 Hr Chg.	2	20			7		19		71		97
1-13-'22	Run #8 7 Hr Chg.	5	22			22		51		19		72
1-16-'22	Run #9 7 Hr Chg.	2	16			16		32		38	15	101
1-17-'22	Run #10 7 Hr Chg.	0	15			13		30		61		104
1-18-'22	Run #11 7 Hr Chg.	2	15			12		40		50		102

New Run, not seen by you.
Haa

D. S. Sargent,
2nd Floor Test.

857 1/2
3rd

1-10

1-20

1-22

Etc

January 19, 1922.

From : D. S. Sargent, Cell Test Dept.,

To : Mr. J. P. Monahan,

Subject: Capacities delivered by 119 Rejuvenated A4 Cells.

	Ampere	Hours	120	135	150	152.5	155	157.5	160	165-
1- 4-'22 Run #1 7 Hr Chg.	1	17			6	17	78			101
1- 5-'22 Run #2 7 Hr Chg.	4	13			12			34		56 102
1-6- '22 Run #3 7 Hr Chg.	2	20			26			61		10 97
1- 9-'22 Run #4 7 Hr Chg.		10			13		17		35	44 101
1-10-'22 Run #5 7 Hr Chg.	7	35			41		35			76
1-11-'22 Run #6 7 Hr Chg.	5	38			39		37			72
1-12-'22 Run #7 7 Hr Chg.	2	20			7		19		71	
1-13-'22 Run #8 7 Hr Chg.	5	22			22		51		19	
1-16-'22 Run #9 7 Hr Chg.	2	16			16		32		38	15
1-17-'22 Run #10 7 Hr Chg.	0	15			15		30		61	
1-13-'22 Run #11 7 Hr Chg.	2	15			12		40		50	
1-19-'22 Run #12 7 Hr Chg.	2	14			10		22		47	24

D. S. Sargent,
2nd Floor Test.

On run ¹⁵³ 164 (normal rate) cells gave ^{67.2%} 72.3% above 150 A.H.

2-2-22

FD-222

Mr. Elin

file 7

Report on four sets that
were regenerated by acids
and water, and only

Mr. Elin

These tests,

There are 3 different
tests going on
"Regenerated Cells"

[ENCLOSURE]

Cells No.	Run No.	Length of Charge	Date	A.H.	Length of Dischg in A.Hours.	Final Voltage.
OX	Run 1	48 hrs.	1-3-22	217	Not very sluggish	99
OX		1/2 H		207	" " "	74
OX				213	" " "	93
AX				200	" " "	—
	Run 2	15 hrs.	1-5-22	196		102
		N		166		96
				196		101
				162		81
	Run 3	7 hrs.	1-6-22	165-7		107
		N		167		102
				160		106
				161		78
	Run 4	7 hrs.	1-9-22	167	Prev. idle 60 hrs.	103
		N		166		100
				167		103
				160		88
	Run 5	7 hrs.	1-10-22	169	Power off 26 min.	103
		N		158	25 min. balance.	98
				157	given to compensate.	102
				142		—
	Run 6	7 hrs.	1-11-22	169		103
		N		163		98
				167		102
				142		—
	Run 7	7 hrs.	1-12-22	167		106
		N		164		102
				166		104
				166		87
	Run 8	7 hrs.	1-13-22	166		102
		N		167.5		98
				162		101
				162		—
	Run 9	7 hrs.	1-16-22	166	Previously idle 60 hrs.	102
		N		163		99
				166		101
				166		70
	Run 10	7 hrs.	1-17-22	166		106
		N		165		102
				164		108
				160		100
	Run 11	7 hrs.	1-18-22	163		103
		N		161		101
				162		102
				169		99

Acid Treatment

Cells AX, OX, CX - OX are "Group 4" cells, viz, those having capacity of 120 A.H. or over, before regeneration.

[ENCLOSURE]

Run 12	7 hrs. 1-19-22	169	165	102
	N	165		100
		166		101
		160		98
Run 13	7 hrs. 1-20-22	167	160	104
	N	163		102
		164		103
		160		100
Run 14	7 hrs. 1-24-22	164	After 8 hrs. stand	160
	N	160		102
		160		100
		160		98
Run 15	7 hrs. 1-25-22	168	160	104
	N	165		103
		162		102
		162		102
Run 16	7 hrs. 1-26-22	160	160	100
	N	154		97
		153		96
		154		97
Run 17	7 hrs. 1-27-22	162	160	102
	N	161		101
		160		100
		160		100
Run 18	7 hrs. 1-30-22	164	After 60 hrs. stand.	165
	N	160		99
		160		98
		160		98
		160		97
Run 19	7 hrs. 1-31-22	165	165	99
	N	160		94
		160		93
		160		92
Run 20	7 hrs. 2- 1-22	161	165	97
	N	160		95
		160		93
		160		92

EDISON STORAGE BATTERY CO.

Memorandum

February 13th, 1922.

FROM: J. F. Monahan
TO : Mr. Thomas A. Edison
SUBJECT: Contact Pole Nut.

At the time we adopted the new Spring it was contemplated to change the Contact Pole Nut, but Roscoe Smith and myself thought that inasmuch as there were so many of our other types in use, that by designing a new nut it would only add to the number of parts to be carried and cause some confusion to our customers.

Our present Contact can be used for the old and new type covers by the addition of one nut which is a punch press operation and made up very cheap.

If we have a demand for a new style pole nut I rather favor the design submitted by Payne, and agree with him that Ricklin's suggestion is too clumsy.

We would make no saving by adopting Ricklin's suggestion, as these pole nuts would be made on an Automatic Four Spindle Machine and the operation of forming would take the same time as it would to drill, and our production would be the same if either model was adopted.

Would suggest that the addition of this part be deferred until we have our new model complete.

J. F. Monahan.

JFM:AS

Ricklin

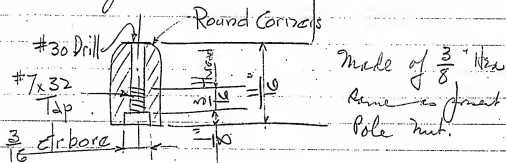
Notes - Ricklin

[ATTACHMENT]

Payne J
January 30. 1922

Mr. Edison: - Spring contacts are omitted
from Contact Pole Nut on New Lamp Cells
with the new style container covers.

Suggest that instead of the present
Pole Nut a new pole nut be used.
The design could be thus:



Such a nut would be easier
to form and easier to tap — therefore
cheaper. It is possible to make this
nut complete on one press machine.

Pickles

[ATTACHMENT]

February 3, 1922.

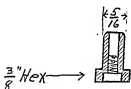
Mr. Wilson;

In the Contact role Nut suggested by Mr. Ricklin there would be some advantage in drilling the hole all the way through, this would allow easy escape of the chips when tapping thereby preventing breakage of taps.

There would be a slight gain in production by eliminating the forming operation on present type nut as the time required to turn out one piece is the time of longest operation and the forming operation is the longest.

I would not approve a nut having the full size hexagon in its total length as it would be a very clumsy looking product. While we desire utility rather than beauty there are certain limits in the proportion of parts which should be observed.

Since the contact spring is no longer to be fitted over this pole nut I would suggest that we strike a happy medium between Mr. Ricklin's suggestion and the present article by making the forming operation simpler and not so deep; thus:



It would not be necessary to hold this formed diameter to such close limits as when the spring was used on it.

Payne

FILE COPY

April 5, 1922.

Return to Affengarten

Mr. Edison:

THE BOSTON KILGORE OF STORAGE BATTERY REPORTS:

Have noticed for some time considerable seepage from filter presses in Chem. Operation Dept., on both third and fourth floors.

Found two chief causes for this condition - (a) leakage from presses from between plates and (b) seepage from filtered sludge when press is knocked down after completion of cycle.

The condition under (a) is brought about mainly from poorly placed filter cloths and apparently also from chipped and worn plates. Attention to proper setting of cloths and replacement of poor plates in presses should minimize this particular condition and assist in general better appearance of these floors.

The condition under (b) is somewhat more important as it involves the loss of a certain amount of precipitate and increases the difficulty of handling the filtrate. At the present time when a press is knocked down, the filtrate is very moist and retains sufficient fluid to make a pasty mass under the press, the filtrate then running into the drains. It has been suggested to the foreman, Mr. Burger, that a pipe line carrying compressed air at about 50 to 60 lb. be hooked onto the press and when the cycle is complete that the fluid be cut off and the remaining moisture in the filtrate blown out by the compressed air, leaving a dry readily handled "cake" of filtrate and minimizing loss of solution and precipitate. As the filter presses are to be moved into Bldg. 314 in the very near future, it would appear advisable to make provision for the installation at this time. Mr. Burger thinks well of the scheme.

In this same connection, you may wish to give thought to the type of press best suited to filtering. The greatest expense attached to filtering with plate presses is the cost of the filter cloth. This expense is absolutely minimized, in the so-called "continuous" filter presses, of either the direct pressure type or the "vacuum" type.

In the event of any replacement of filter press equipment, I would recommend that the matter be gone into. If the Oliver Continuous Filter Co. maintain their past service, they would be glad to make an installation subject to successful results.

H. A. ALFENGARTEN

*Edison = look this up = I think
it's from an Oliver filter press idler
at Cleveland works - S*

Haa

4/6/22

Mr. Edison -

This is the new msg
you placed with Bissell
until you can be back -

Have sent copy to Mr.
Abrams the Asst. Chapt.
of the Battery, who has the
actual msg. under his
jurisdiction - Copy also
to Fagan.

Have you any suggestions
as long as Chem. Operations
are to be moved?

Haa

(COPY)

EDISON STORAGE BATTERY CO.

Memorandum

April 14th, 1922.

FROM: E. C. Norton

TO: Mr. Thomas A. Edison

SUBJECT: Chemical Operations.

*Killoran -
See Mr. Es note
next. Hg*

*Note on next page
Book*

I have been studying this matter lately and I am convinced that a decided improvement can be made in the operation of the sumps and through to the first filtering operation.

The attached memorandum touches on the same matter and I am accordingly taking this opportunity of outlining the possible changes which I have in mind. In accordance with the notation that I made on the carbon copy of this memorandum which copy I returned to you several days ago I had already learned that Mr. Hunter has an Oliver Press which is more than large enough to handle our maximum production. This Press was used on the Hydrate job and Mr. Hunter tells me that it worked very satisfactorily, except that it seemed impractical to accurately control the amount of moisture left in the filter cake.

This Press can be brought up from the Lake and set up, the necessary new parts provided including the small centrifugal pump which Mr. Hunter has used for another job, for about \$250.

The carbonate which we form is very light and settles very slowly, also the percentage of solids is in the neighborhood of one-half of one percent.

I have come across an arrangement which is very inexpensive and which I would like to try in this connection. This comprises the use of several perforated iron tubes 6 or 8 inches in diameter wrapped with filter cloth and wire and mounted upright in the sumps. These tubes are closed at both ends so that the only solution which gets into them is that which goes through the filter cloth. A sufficient number of these is provided so that the filtrate can be constantly pumped by means of a pipe leading into the top of each tube or tank at the same rate at which it enters the sump. This arrangement will tend to make the carbonate settle very rapidly around each tube and at the end of every half hour or hour the pump can be shut off and water pressure applied for a very short interval to loosen the cake which is formed. This cake should then settle to the bottom of the sump very rapidly, that is in a minute or so and can then be pumped through the filter. It should be possible with this arrangement to obtain in the neighborhood of ten or fifteen per cent solids in the mixture that is pumped through the filter.

As the greatest difficulty of the present is that in getting efficient sedimentation even though a small percentage of Caustic Potash or Soda is added, it occurs to me that if the arrangement which I have outlined can be made to operate satisfactorily we should be able to eliminate all but two pumps and as we have room in the garage to locate there, this would enable us to transfer the whole operation to the one building and entirely abandon the pumps in the present cement building.

With the additional change from the plate presser to the continuous filter the whole chemical operation job would be greatly simplified and with the present production it should be possible to save the cost of these changes in labor alone in six months.

It is now necessary to have at least one man on duty all of the time to take care of the present pump and with a very little increase in production it would be necessary to have two men so that one can take care of the filter presser across the street while one man handles the pump in Building #127.

If the proposed arrangement can be made to work these two men can work together in the one plant and can so practically all of the work of nickel refining on each shift. With the present arrangement it will only be possible to fill up the filter presser at night leaving them to be cleaned and the carbonate dissolved the next day unless the force were to be considerably increased.

It will cost in the neighborhood of \$500 including the moving and overhauling of the continuous filter to find out whether this arrangement will work and if it is satisfactory it will cost another \$500 to install the two pumps in the new building and to complete the job. Even though it should not appear practical to dispense with the present pumps we will probably be able to obtain a decided improvement if we can use the continuous type of filter using the pumps as they now are.

H. C. Egerton

Edison's comments on Mr. Egerton's letter were: (original sent Egerton)

"EGERTON: You can get perforated screen sheets and make a tube, but what is better is rolls of wire screen which can be formed into tubes as you suggest and cloth put over. Considerable will be lost on the start until cloth gets closed up and will then go slow without a pressure heat. I never had much luck with this scheme. I think the Oliver Filter will handle enormous quantities of water and as the cloth has its pores closed and yet very thin amount of soda on it, it filters rapidly. I saw one working in a Soda Works on Soda Ash doing 2000 tons daily of semi-dry soda ash. Why not try a small experiment in Chem. Lab with the thin liquid. EDISON"

4/2/02
Noted. Think Mr.
Edgerton is serious as
advances the press
probably first try in work trying
Edison

Storage Battery

May 6th, 1922.

Mr. Edison:

Report on leaky cans.

(Note: Send with this report two mine lamp can sides for purposes of illustration. Samples are marked "A" and "B". These were taken from stock in Cell Assembly Dept. awaiting forruling and welding into cans.)

There has been trouble during recent weeks with cans showing leaks. Leaks show up after cell has been cleaned and sealed, and is being assembled into battery or is awaiting shipment. In other words, a few days standing after cell has been cleaned and coated with eucalite are sufficient for leaks to begin showing up.

The leak then appears on the top weld - where cover is welded to can side. Leaks are usually very small holes in the weld and are difficult to find with the naked eye. They occur on no particular type of cell nor do they appear in any particular location on the top weld. They are not confined to the low portions of an irregular or "bumpy" type of weld but occur usually on an absolutely even, straight weld.

These pin holes or "hair lines" through the weld draw potash through from capillary attraction and the result is a thin line of white potash showing up against the black eucalite on can side.

These top weld leaks, however, are not dangerous from the standpoint of loss of electrolyte. Relatively very little will escape.

The danger comes in on the bottom weld leaks which will rarely show up before the cell leaves this plant. The new stock is used for covers and bottoms. Theoretically, there should be as many bottom weld leaks as top weld leaks. I find this is the case. There have been an increase in the number of rejects in the can testing operation of bottom and side welds. Most of these bottom leaks are caught in this test (6 to 10 lbs. of air when can is submerged in water.)

I question whether this test is catching all of these very small bottom leaks. There is no way of knowing except to watch the way cells shipped out of this plant within the past month or so behave. Leaks will not show up here in the plant before shipping because bottoms have been given a thin coating of nickel plate over the weld and a double coat of eucalite paint.

The chief cause of these pin hole weld leaks is bad can side stock. This plant has been using up an accumulation of steel bought during or just after the war. This stock has not been good. There was considerable laminated stock in the lot. This would show up by blisters in the steel when stock came from the annealing furnaces. It is impossible to always get a good weld on laminated

McEdison says:
"Send Samples
to Lamb with
this Report"
Ala

I wish particularly to call attention to this type of defect illustrated by blisters on sample "A".

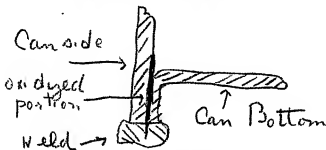
New nickel steel can sides are now going through manufacturing operations. This stock looks far better and should give no trouble. Will watch this and report results.

Welds on the can are made without flux. It is necessary, therefore, that surfaces to be welded be absolutely clean and free from oxidation. I find this is not always the case.

Can sides coming from annealing pots are frequently oxidized in the annealing operation with a strip of varying width at top or bottom of the can side. The worst of these are rejected and re-annealed. Some are permitted to go through.

This oxidation is illustrated on both sides of samples "A" and "B".

The weld then is thus:



In this connection would suggest a chemical analysis of the hydrogen gas being used on annealing operations. Analysis to be made from hydrogen line before gas goes into pots and an analysis of gas being exhausted from annealing pots.

Other foreign material on the surface to be welded is dirt (rare); oil (rare, except on mine lamp cans which get some oil from the punch press operation of stamping the trade mark on can side); black crayon (pieces of can sides in Cell Assembly Dept. have been numbered with black crayon. Have seen cans where crayon mark once seen to welding surface.)

Summary of Recommendations:

- ? — (1) Great care to prevent using of laminated stock.
(2) A chemical analysis of hydrogen gas.
(3) Be careful of oil on mine lamp cans.
(4) Greater care in the marking of can sides with black crayon.

Biswell

[FROM G.P. LAMB (INCOMPLETE)]

Mr. Edison:—

Bissell
Attached report.
Leaky cans.

MAY - 9 '22

There is not a new idea or solution here.

We were all familiar with all points mentioned and steps have been taken to overcome trouble and shortly hope to bring leaks to a minimum.

Was in hopes that Bissell would be able to find something new or causes we had not found, but apparently we have covered the ground here thoroughly and if Bissell continues to watch this for a time, along with our own checks, he will be able to give a favorable report in the near future.

The samples submitted are very rare cases, question this as a cause of leaks already follow in case.

May 11, 1922.

Mr. Edison:

Re attached report and answer.

Lamb. - go for chemical

Notice nothing in Lamb's answer about making a chemical analysis of hydrogen gas. Is this going to be done?

As was clearly shown by sample there was oxidation in air during operation. In other words, the air leak was not done in a neutral atmosphere - there was oxygen present.

The idea of the chemical analysis is to see where the oxygen is entering the line and to stop it.

MAY 11 '22

Barnell

MAY 13 '22

Mr. Edison:-

Re - attached.

Note or chemists
report.

From same would say
gas is all right and
not the cause of our trouble.

Be advised that we
take these tests every
once in awhile to see
that all is O.K.

5/15/22

Noted

Bissell

Jambl.

[ENCLOSURE]

Wissell's report

In accordance with Bissell's recommendation to test Hydrogen Gas before entering and after leaving annealing pots, such test was run this afternoon MAY 12

Gas entering = 0.2 % Oxygen
Gas leaving = 0.2 % Oxygen

Sample leaving pots was taken from pots in cooling shed shortly after removal from furnace and while sitting off in Hydrogen atmosphere.

Pots were noted to be in good condition and covers well sealed with fire clay.

The analyses showed very high purity gas, and compare with results of analyses which are made from time to time to check performance of generator.

49.7 % purity.
 Leakage of Hydrogen analyses shows

I
Charles

I shall want more than
January 2, 1928

this blue print to agree, want
Estimate storage with costs
also, estimate for chemical works

Mr. J. W. Robinson,
Secretary.

Attached you will find blueprint showing the necessary equip-
ment and time required to install to bring the present equipment of the
Storage Battery up to the point where we can produce 2000 A4 Equiva-
lents in two 8 3/4 hour shifts.

Will you kindly request the Board of Directors to approve
the expenditure of \$54,600 for the installation of this equipment.

The estimated minimum time required to complete the install-
ation, including the automatic cranes, is seven months.

While we have no definite assurance of an increase in our
business, I feel that we should be prepared for a production of at
least 2000 A4's per day and should not wait until the business actu-
ally comes in before making the change in equipment.

Frank D. Fagan

CC to Messrs. T.A. Edison ✓
Chas. Edison
Machert

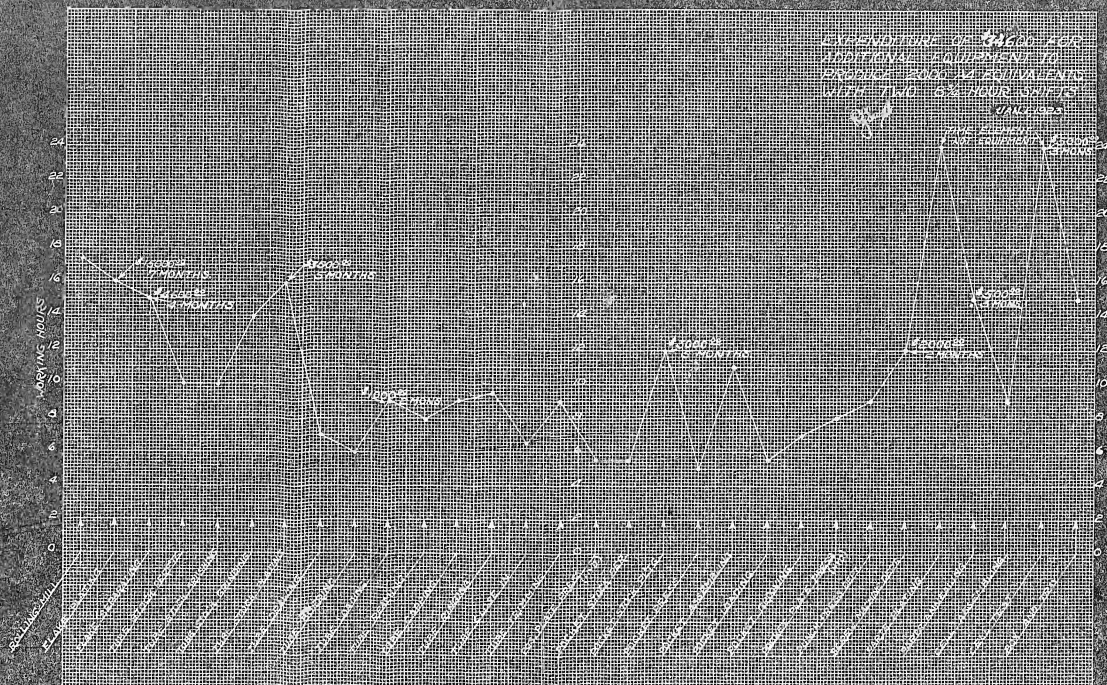
With regard to the Edison Chemical
Works Division, it will be necessary to
make the following expenditures to in-
crease production to 2000 A4's per day:-

Iron Side	\$4886.00
Nickel Side	2000.00
	\$2886.00

In only two cases will it be necessary
to purchase new apparatus, namely, reduc-
tion pots and percolators; in all other
cases it is a question of putting the ap-
paratus now on hand in workable condition.
In some instances we can extend these pur-
chases over a period of from two to six
months.

Approval is therefore requested for a
total expenditure of \$41,456.00 covering
Orange Division and Chemical Works Division.

[ATTACHMENT]



ELLSON STORAGE BATTERY CO.

Menomonee

January 8th, 1925.

EXPENDITURE FOR ADDITIONAL EQUIPMENT TO PRODUCE 2,000
AA EQUIVALENTS WITH TWO - EIGHT AND THREE QUARTER HOUR SHIPS.

*4 Cranes to
make 500 Cells
Extra within 10k*

PLATE PLATING

Four Automatic Cranes - \$15000.00

PLATE SEPARATING

New Dryers - 2000.00
New Centrifuges (This has been approved) - 2000.00

PARTS PLATING

New Plating Machines - *Guaranteed these
were not built long
ago & some are
working* 5000.00

SCREW MACHINE

Two 60 - B.S.S. Automations - 2000.00

ANNEALING

New Pots - 500.00

TUBE LOAD

Repair Parts - 1000.00

CELL TEST

Repairing Panels - 5000.00

TOTAL ----- \$34600.00

R. J. Smith.

*Check magazine why this
account cost so
Expended*

*Bought
already*

oh

ADDITIONAL EQUIPMENT REQUIRED FOR 2,000 CELLS PER DAY.

5-1/2 DAY BASIS.

Operation.	Equipment Required.	IRON SIZE.	Work to be done.	Cost.	Time in which to Purchase.
Gas House	4- Generators	None			
Crystal Room	14- Tanks	Make repairs on tanks	2000.00	3 Months	
Centrifuge Crystals	2- Centrifuge	None			
Sulfate Drying	2- Driers	None			
Roasting Red Oxide	3- Furnaces	Install 1 Furnace	500.00	At Once	
Percolating Red Oxide	2- Percolators	Purchase 2 Percolators	795.00	At Once	
Centrifuge Red Oxide	1- Centrifuge	None			
Drying Red Oxide	2- Driers	None			
Reduction	14- Furnaces	Purchase 12 Pots	1250.00	6 Months	
Self-heating	3- Tables	None			
Grinding	2- Mills	None			
Reclaim Iron	1- Bore, 1- Mill,				
	1- Table	None			
Mixing	2- Boxes	None			
Shipping	Drums	Purchase 50 Drums	222.00	3 Months	
			4839.00		

6976

ADDITIONAL EQUIPMENT REQUIRED FOR 2,000 GALLS PER DAY.

5-1/2 DAY BASIS.

NICKEL SIDE.				
Operation.	EQUIPMENT REQUIRED.	Work to be done.	Cost.	Time in which to Purchase.
Handling Acid	2- Diluting Tanks	None		
Handling Acid	2- Distributing Tanks	Install 1 Tank	100.00	At Once
Dissolving Nickel	4- Generators	Rebuild 1 Generator	400.00	At Once
Dissolving Nickel	4- Neutralizing Tanks	Rebuild 2 Covers	700.00	2 Months
Dissolving Nickel	1- 24" Filter Press	None		
Nickel Purification	3- Purifying Tanks	None		
Filtering	1- 36" Filter Press	None		
Storage	2- Tanks	None		
Precipitation	2- Tanks	None		
Precipitation	1- Tank	None		
Precipitation	1- Tank	None		
Filtering	3- 36" Filter Presses	None		
Filtering	6- Wash Boxes	Build 6 Boxes	300.00	2 Months
Frothling Drying	2- Dryers	None		
Percolation	7- Percolators	None		
Perco- Drying	1- Tunnel	None		
Perco- Drying	7- Cars	None		
Perco- Drying	Fans	Repair Fans	500.00	At Once
Crushing	1- Screen	None		
Crushing	5- Sets Rolls	None		
Washing	1- Dorr Classifier	None		
Drying (Final)	14- Cars & Fans	None		
Screening (Final)	1- Rapid Sifter	None		
Screening (Final)	1- Sewage Screen	None		
Mixing	1- Mix Box	None		
Shipping	Drums	None		
			2000.00	
MERCURIO OXIDE				
Dope	1- Dissolving Pot	None		
Dope	1- Wash Kettle	None		
Dope	1- Drier	None		
HYPO CHLORIDE SODA				
Hypo	1- Mix Tank	None		
Hypo	1- Storage Tank	None		
Hypo	1- Pressure Tank	None		

12/16

Jan. 22, 1935.

EXPENDITURE FOR ADDITIONAL EQUIPMENT TO PRODUCE 2,000 A4 EQUIVALENTS
EDISON STORAGE BATTERY COMPANY DIVISION.

Operation.	Equip. Required.	Work to be Done.	Cost.	Labor.	Material	Cash Leaving Edison Industries.
Flake Plating	4 Cranes	Rebuild Old	\$15,000.	\$10,000.	\$5,000.	\$25,000.
Flake Separating	Continuous Dryer	Build New.	\$2,000.	\$1,500.	\$500.	\$2,000.
Parts Plating	5 Machines	Build New.	\$6,500.	\$4,000.	\$2,500.	\$2,000.
Screw Machine	2 - 00 S.A.S.	Purchase.	\$2,000.	---	---	\$2,000.
Annealing	New Pots	---	\$500.	\$25.	\$475.	\$500.
Tube Load	Repair Parts	---	\$1,000.	\$350.	\$650.	\$1,000.
Cell Test	Meters & Rheostats.	Repaired.	\$5,000.	\$1,000.	\$4,000.	\$5,000.
TOTALS -	-----	-----	\$32,000.	\$17,325.	\$12,675.	\$30,800.

EXPENDITURE FOR ADDITIONAL EQUIPMENT TO PRODUCE 2,000 A4 EQUIVALENTS
EDISON CHEMICAL WORKS DIVISION.

Handling Acid	One Tank	Install	\$100.	\$50.	\$70.	\$100.
Dissolving Nickel	-----	Rebuild (1)	\$400.	\$400.	---	\$400.
"	-----	Rebuild 2 Covers	\$700.	\$700.	---	\$700.
Filtering	6 Mash Boxes	Build	\$500.	\$350.	\$80.	\$250.
Perco-Drying	-----	Repair Pans	\$500.	\$500.	---	\$500.
Crystall Room	-----	Repair (14 Tanks)	\$2,000.	\$1,000.	\$1,000.	\$2,000.
Roasting Red Oxide	-----	Rebuild (1)	\$500.	\$500.	---	\$500.
Percolating Red Oxide	(2) Percolators	Purchase	\$796.	---	---	\$796.
Reduction	(12) Pots	Purchase	\$1,250.	---	---	\$1,250.
Shipping	(50) Drums	Purchase	\$222.	---	---	\$222.
TOTALS -	-----	-----	\$6,228.	\$2,850.	\$1,120.	\$6,798.
GRAND TOTAL -	-----	-----	\$38,228.			\$37,598.

When put in Cell.

first Contact for 5 sec should be

25 milliseconds. Then go to 100 mil

seconds until covered with Nickel

when covered go to 600 m

for 2 hours



6 - 1/2 cup. white brown

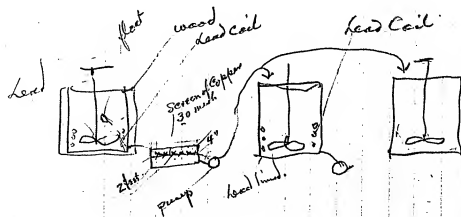
2 cups. Manganese Dioxide
the same

6 Manganese Dioxide is a light
black, & not off white

6 1/2 cup. white brown

6 Lithia hydroxide - black
very thin - as fully as possible
mixing -

6 Manganese Dioxide - black
all along 24 hrs -



- Denatured Alcohol Fair
- Amyl Alcohol Fair
- Ether Fair
- Benzol very good
- Solvent Naphtha good
- Toluol very good
- x Xylol very good
- x Benzine good
- x Amyl Acetate good
- x Pyridine very good
- x Gasoline good
- x Acetone very good
- Chloroform very good
- Kerosene oil Fair
- Turpentine Fair
- Carbon Tetrachloride very good
- Carbon Disulfide very good
- Fuel Oil Fair

Other Chemicals not listed

Test

Test for solubility of

Tetrachloronaphthalene

After explaining to Stout & the Gent foreman from
(Strange Bat Co) about running discs in wrong
direction. Went into 24 Bldg & found 27 belts
running wrong direction, over 200 yds.
Adjusted to strike at wrong place - 4 men
doing Absolutely Nothing =
This seems hopeless.

**Edison Storage Battery Company Records
Research Notebook (1901-1903)**

This bound volume contains experimental notes and test results by Robert Rafn. The book covers the period March 1901-May 1903, but one of the loose items found in the book dates from 1900. The entries deal with a variety of competing storage batteries, including the Jungner battery; a motor and speed controller for electric vehicles; and an electric meter. A blueprint of a "Chloride Accumulator" has been pasted into the back flyleaf. The first page has been used as a table of contents. The cover is stamped "Record." The book contains 197 numbered pages; many pages are blank.

All entries in the book, including the blueprint, have been selected. Of the numerous loose pages, only the two dated items have been selected.

Test of Chloride (Expts) Cell	10
Experiments on Amine Electrolyte	25
Fame Rolling	37
Jumper Rolling	50
Meltin	100
Test of reversed 2440	
Automobile Motor	120
Magnetic Speed Controller for	
Automobile	137
Mile Expts continued	147

First Discharge on Constant Current.

Constant Current. 20 Amperes.

No	Time	Closed	Voltage.	Avg. Hour.	Volt. Amp.	Vol. Amp. Rout.	Interz. Drop.	Efficiency	Resistance.
1	3.20	2.00							
2	3.45	1.75	2.03	8.33		74.89	.065	.9729	.00275
3	4.15	1.76	2.02	17.33		14.61	.06	.9711	.003
4	4.46	1.93	2.01	17.33		14.46	.06	.966	.004
5	5.15	1.90	1.99	36.33		14.15	.09	.954	.0045
6	5.45	1.665	1.97	46.33		17.82	.105	.947	.05275
7	6.15	1.87	1.93	58.33		18.37	.12	.935	.06
8	6.45								
9	7.55		2.02						
9	8.00	1.81	1.92	59.97			.11	.942	.055
10	8.15	1.69	1.82	64.99		8.79	.13	.929	.065
11	8.20	1.00	1.50	66.65			.150	.556	.0444
						<u>2.121</u>			
						12.127			

Second Discharge, on Constant Resistance.

N_a	τ	$\frac{\tau}{\lambda}$	ϵ	$\delta \tau$	$\delta \tau$	$\delta \epsilon$	$R \frac{\delta \epsilon}{\epsilon}$	$\epsilon - \epsilon$
1	3.10	38.	1.95					
2	3.15	34.4	1.95					
3	3.30	34.2	1.93	2.05		5.64	.002	.10
4	3.45	33.8	1.91	2.05	14.7	2228	.0035	.12
5	4.15	32.4	1.84	2.03	19.7	3838	.0035	.12
6	4.30	31.7	1.79	1.95	36.67	6998	.0043	.14
7	4.45	30.0	1.69	1.93	44.69	8486	.0050	.16
8	4.55	28.3	1.67	1.89	52.40	9798	.0060	.20
9	5.00	24.3	1.35	1.80	99.19	10940	.0188	.45

Third Discharge on Constant Resistance.

No.	t	i	e	E	it	ei	eit	e ² E	R	E-e
1	11.00	49.0	1.95	2.09	6.366		12.316	.928	.00322	.15
2	11.05	46.5	1.94	2.08	9.466		16.466	.927	.00324	.15
3	11.12	46.4	1.93	2.08	9.466		23.631	.929	.00313	.145
4	11.16	46.3	1.925	2.07	11.773		30.496	.925	.00338	.155
5	11.20	46.9	1.915	2.07	15.614		37.886	.929	.00340	.155
6	11.26	45.6	1.905	2.08	15.426		46.006	.926	.00331	.15
7	11.30	45.3	1.89	2.04	23.213		52.886	.922	.00367	.16
8	11.35	44.8	1.87	2.03	26.967		60.076	.921	.00360	.16
9	11.40	44.5	1.86	2.02	30.687		68.936	.921	.00362	.16
10	11.45	44.2	1.85	2.01	35.382		72.661	.914	.00379	.17
11	11.50	43.7	1.82	1.99	38.044		79.211	.902	.00482	.175
12	11.55	43.1	1.805	2.00	41.660		86.691	.929	.00369	.155
13	12.00	42.5	1.776	1.93	46.216		91.721	.939	.00265	.11
14	12.05	41.5	1.73	1.84	47.716		97.666	.927	.00324	.13
15	12.10	40.4	1.67	1.80	52.025					

Fourth Discharge on Constant Resistance.

No.	t	i	e	E	it	ei	eit	e ² E	R	E-e
1	8.50	66	1.88	2.04	2.24		4.2	.922	.00272	.16
2	8.52	66.6	1.87		5.13		9.62	.917	.00284	.17
3	8.55	67	1.88	2.05						
4	8.55	65.5	1.875							
5	9.00	68.2	1.85	2.03	10.81		20.16	.913	.00295	.18
6	9.05	67.0	1.82	2.04	16.45		30.57	.892	.00328	.22
7	9.10	63.6	1.805	2.03	21.77		40.15	.889	.00354	.225
8	9.15	62.3	1.79	2.01	27.05		49.47	.891	.00354	.22
9	9.20	60.9	1.75	1.99	32.658		58.39	.879	.00395	.24
10	9.25	60.0	1.72	1.98	38.668		66.44	.868	.00434	.26
11	9.30	58.1	1.67	1.94	43.368		74.91	.862	.00464	.27
12	9.35	58.4	1.54	1.85	47.085		81.35	.832	.00580	.31
13	9.40	48.3	1.38	1.84	51.365		86.50	.757	.00754	.46
14										

Changed Resistance slightly

Fifth Discharge on Constant Resistance.

No.	t	i	e	E	if	ri	eit	eE	R	E.e.
1	1.20	37.0	1.95	2.08	12.066		23.26	.938	.00351	.13
2	1.40	35.4	1.83	2.06						
3	1.40	36.1	1.83							
4	1.41	73.5	1.82.5		13.312		25.537			
5	1.42	73.4	1.82		14.536		27.757			
6	1.43	73.0	1.82		15.756		28.961			
7	1.43	35.1	1.93	2.05				.942	.00399	.14
8	1.48	35.1	1.92.5	2.05	18.681		35.601	.939	.00413	.145
9	1.53	35.05	1.92	2.05	21.601		41.221	.936	.00428	.15
10	1.58	34.95	1.91	2.04	24.506		46.801	.937	.00372	.13
11	2.03	34.9	1.90	2.03	27.426		52.39	.936	.00373	.13
12	2.03	72.5	1.78		28.638		54.505			
13	2.04	72.0	1.77		29.530		56.65			
14	2.05	71.1	1.76		31.018		58.740	.866	.00383	.27
15	2.06	70.6	1.75	2.02				.932	.00406	.14
16	2.06	34.5	1.88	2.02			14.140	.933	.00393	.135
17	2.11	34.4	1.87.5	2.01	33.893					

Fifth Discharge. Concluded.

No.	t	i	e	E	if	ri	eit	eE	R	E.e.
18	2.16	34.1	1.87	2.02	36.753		67.500	.928	.00440	.15
19	2.21	33.8	1.85	2.00	39.581		74.766	.928	.00444	.15
20	2.26	33.7	1.84	1.99	42.391		79.940	.924	.00445	.15
21	2.26	70.0	1.69							
22	2.27	67.1	1.66		43.553		81.137			
23	2.28	65.9	1.63		44.641		83.678			
24	2.29	65.0	1.61	1.97	45.781		85.448	.817	.00554	.36
25	2.29	32.7	1.78	1.96				.908	.00581	.16
26	2.34	32.1	1.76	1.95	46.431		90.225	.903	.00542	.19
27	2.39	31.7	1.73	1.93	51.691		94.865	.897	.00632	.20
28	2.44	30.6	1.67	1.89	53.486		99.285	.884	.00718	.22
29	2.49	29.0	1.58	1.87	56.111		103.628	.845	.00863	.25
30	2.49	53.0	—	1.81						

Variations in resistance are made to illustrate the increase of power used on hills.

Sixth Discharge on Constant Resistance.

No	t	i	e	P	it	ei	eit	eE	R	P-e
1	1.10	38.5	1.96	2.06				.953	.00267	.10
2	1.15	37.4	1.96	2.05	3.17		2.22	.943	.00321	.12
3	1.25	37.2	1.935	2.07	4.966		16.73	.935	.00363	.136
4	1.35	37.	1.92	2.06	17.169		30.05	.934	.00378	.14
5	1.45	36.6	1.91	2.04	23.302		41.80	.936	.00355	.13
6	1.55	36.3	1.89	2.03	29.377		53.34	.942	.00386	.14
7	2.10	35.4	1.845	2.00	38.339		69.05	.942	.00438	.155
8	2.20	34.5	1.78	1.96	44.164		78.59	.948	.00522	.18
9	2.30	33.1	1.72	1.94	49.974		89.31	.887	.00665	.22
10	2.45	24.5	1.26	1.80	57.024		100.73	.701	.02204	.54

Seventh Discharge on Constant Resistance.

No	t	i	e	P	it	ei	eit	eE	R	P-e
1	9.46	36.	1.97							
2	9.50	35.5	1.975	2.05	5.963		11.778	.950	.00293	.105
3	10.05	35.5	1.965	2.06	14.945		20.278	.950	.00295	.105
4	10.45	35.3	1.965	2.06	20.775		40.708	.939	.00354	.125
5	10.45	34.1	1.88	2.00	28.145		73.868	.940	.00352	.12
6	11.00	33.3	1.83	1.95	46.567		88.446	.924	.00437	.15
7	11.30	28.1	1.57	1.85	61.917		114.878	.820	.0122	.34
8	11.36	13.0	1.48	1.80	63.052		117.965	.806	.0269	.35

Eighth Discharge on Constant Resistance.

No	t	i	e	R	it	ei	eit	e ² t	R	R ² e
1	1025	35.7	2.02	2.10	7.78			.912	.00237	.08
2	1035	33.4	1.97	2.05	5.708		1152	.948	.00329	.11
3	1105	32.8	1.93	2.04	22.258		43.79	.947	.00335	.11
4	1125	32.1	1.89	2.02	43.074		64.44	.943	.00405	.13
5	1140	31.5	1.85	2.00	57.024		79.20	.925	.00476	.15
6	1158	30.7	1.80	1.96	57.799		93.54	.918	.00522	.16
7	1200	33.0	1.89	2.01				.940	.00374	.12
8	120	22.1	1.58	1.88	68.899		111.75	.891	.01106	.30
9	124	22.7	1.32	1.80	74.341		116.80	.733	.02114	.48

Ninth Discharge on Constant Resistance.

No	t	i	e	R	it	ei	eit	e ² t	R	R ² e
1	755	34.0	1.96							
2	800	33.3	1.97	2.05	2.512		55.55	.948	.003303	.11
3	815	33.2	1.95	2.07	11.124		21.615	.942	.00398	.12
4	830	33.5	1.93	2.06	19.374		37.886	.937	.00426	.13
5	845	32.4	1.90	2.04	27.534		53.385	.932	.00454	.14
6	900	31.9	1.87	2.00	35.561		68.365	.934	.00407	.13
7	915	31.2	1.82	1.98	43.448		82.885	.919	.00572	.16
8	930	28.9	1.69	1.92	50.710		86.60	.881	.00797	.23
9	940	23.7	1.37	1.80	55.073		102.310	.762	.01814	.43

Tenth Discharge on Constant Resistance.

No.	λ	i	e	R	it	ei	eit	e^2t	R	$R-e$
1.	8.40	345	195	2.06				.961	.00229	.05
2.	8.55	323	196	2.05	8.572	14	14.765	.942	.00360	.12
3.	9.10	32.9	193	2.05	16.757		30.562	.942	.00365	.12
4.	9.30	32.3	189	2.03	27.655		51.616	.932	.00433	.14
5.	9.45	31.7	185	2.00	33.653		65.576	.925	.00473	.15
6.	10.00	30.4	175	1.96	43.740		74.709	.905	.00572	.18
7.	10.15	27.3	160	1.90	51.652		91.727	.892	.01095	.30
8.	10.24	22.7	135	1.80	62.115		97.571	.761	.01782	.45

Eleventh Discharge on Constant Resistance.

No.	λ	i	e	R	it	ei	eit	e^2t	R	$R-e$
1.	8.15	340	197	2.05				.945	.00325	.11
2.	8.32	330	195	2.06	9.466		15.592	.947	.00333	.11
3.	8.47	32.7	194	2.05	17.695		34.564	.937	.00375	.13
4.	9.02	32.0	1895	2.04	25.765		58.070	.929	.004531	.145
5.	9.17	30.9	182	2.00	33.677		64.669	.911	.005725	.18
6.	9.26	26.0	147	1.70	37.92		71.606	.877	.012692	.33

Twelveth Discharge on Constant Resistance.

No.	t	i	e	2	1†	e†	e ² 2†	22	2 ² e
1.	3.35	365	2.02	2.23			.905	.00591	.21
2.	3.45	386	1.98	2.05	5.741	11.472	.952	.00257	.10
3.	4.00	33.0	1.96	2.07	14.066	21.832	.947	.00333	.11
4.	4.15	32.6	1.93	2.06	22.266	43.831	.937	.00345	.13
5.	4.50	31.	1.92	1.98	40.816	75.612	.920	.00376	.16
6.	5.05	29.9	1.95	1.95	48.303	91.976	.898	.00679	.20
7.	5.20	26.0	1.94	1.82	53.220	103.600	.925	.0123	.32
8.	5.22	24.6	1.46	1.80	56.168	104.044	.817	.0139	.34

Thirteenth Discharge on Constant Resistance.

N_{Fe}	f	i	e	Σ	il	ei	eil	e^2e	Pe	Σe
1.	1.25	345	2.01	2.21				.909	.00579	.20
2.	1.35	33.3	1.97	2.05			.11243	.953	.00333	.11
3.	2.05	32.5	1.93	2.06			.46428	.937	.00400	.13
4.	2.20	32.0	1.90	2.03	30.195		57.779	.936	.00406	.13
5.	2.50	31.0	1.87	1.96	45.945		87.994	.923	.00416	.15
6.	3.15	22.0	1.25	1.80	57.955		106.575	.712	.02545	.52

Aug. 1901.

Experiments on an *Zinc*-amine
Nickel Battery.

Essential for the operation of
such cell is an accumulator or
the following three conditions:

- 1) That the amine in question is
a conductor
- 2) That it does not dissolve, during
electrolysis in either direction
Zn \rightarrow Ni and any Nickel hydroxide.
- 3) That Electrolysis between inactive
poles does not change the chemi-
cal constitution of the said
amine (- or - that if a change
takes place, this process is reversible)

The behavior of the electrolyte in regard
to 1 is shown in col 3 & 4.

The voltages given are combinations of
a) voltage of decomposition of the amine.
b) gas polarization and c) Resistance drop.

The test regarding 2) is effected by comparing
a filled cell, that has been for some time
in contact w. freshly prep Zn \rightarrow Ni and
using Fresh. Dist. Cellum.

3) is partially answered in 5, 6, 7.
5 and 6 giving estimated percentage
of theoretical amount of gas evolved at
the poles.

16. New Tinselt. Amount of
 remaining gas at full
 combustion on poly. test.
 The appearance of
 Miller Valley. Ant. Carb. Carb.
 1. Anthracene. 17% 7.4 0 100% Yellow coating on
 graph.

Remains.

Residue & composition

2. Hemellugene 17 9 10% 10% Bullets round.
 anne.

Slight residue

3. Dactylamine 17 8 10% 10% " "

Residue

4. Dactylamine 17 7 0 10% " "

Residue

5. Triox. allylene 17 4% 4% 100% 10% (solid)
 diam.

Slight residue, really

6. Diamine. 17 4 nearly 100% 100% " "

Slight residue

Preliminary amount of Residue on
 Conductivity for all the appearance of
 Test on poly. soln. Residue on
 many vials. Dark Charc.

Residue

7 Triacetylamin. 17 6 0 100% None. No Residue i.e. entirely insoluble.

8 Triacetyl-
 aminon. Hydrate

No Residue

9 Triacetyl-
 aminon. Hydrate

No Residue

17 4. 70% 100% None

10 Triacetylamin

No Residue

Dark brown deposit
on plate

17 4 1/2 40% 100%

11 Triacetyl-
 aminon. Hydrate

No Residue

None

17 4 1/2 30% 100%

12 Triacetyl-
 aminon. Hydrate

No Residue

None

17 4 1/2 20% 100%

13 Triacetyl-
 aminon. Hydrate

No Residue

Strong deposit
on plate

17 3 60% 0%

Name & Formula	Preliminary Conductivity Test	Amount of for test free in parts 1000 gms. of substance	Remarks on appearance of solution after 24 hrs.	Residue
13. None	17	6	10% 100%	Residue
14. Diethylamine.	17	6	10% 100%	Residue
15. Triethylamine	17	4	10% 100%	Slight Residue
16. Diethylamine.	17	9	5% 100% Normal	No Residue

17. Propylamine.	17 1/2	6	0	100%	Residue
18. Methylamine.	17	4	100%	100% very much decolorized - very soluble.	
19. 20% KOH.	18	3.25	100	100	Residue completely.
20. Propylamine.					

Dec 16 1902.

The results of the above described experiments are the following. No one of the 20 anodes is stable enough to resist electrolytic oxidation, which is of course the essential feature of an electrolyte of this class.

For the case that these electrolyte are to be used in connection with Zn & Ni electrodes, it is also required that the Zn oxide formed is reducible to metallic Zn in presence of the electrolyte. To test this latter property, two little grids, one of Mg. containing a mixture of finely divided metallic Mg and freshly ppt. $Zn(OH)_2$ or sublimed Zn, and one of sheet nickel containing $Ni(OH)_2$ & cuprite, were used as electrodes. The Zn oxide was in no case reducible to any perceptible degree.

No 12: Tetramethyl oxymethylene amine
is subjected to electrolysis between two
platinum wires in small beaker.

Sept 14, noon

Current $4\frac{1}{2}$ Volts 21 mA gives a voltage
on the terminals $4\frac{1}{4}$ Volts.
while 20% KOH shows, under some
conditions: 18% $3\frac{1}{4}$ V.

At the start of the experiment
about 20% of the total amount
of O is set free on the anode,
this most possibly decreasing the voltage
at the terminals in correspondence with
the heat of formation of the oxide.
Hydrogen in the electrolyte.
As the experiment goes on the
amount of O evolved seems to increase.
On Monday after 19-20 hours run
the full amount of O is evolved
and the readings are: 14.5% $4\frac{1}{2}$ V.

By this time the solution must
have reached the highest state of oxida-
tion (CH_3O to $\text{CH}_3\text{OH}^{++}$)

For the positive platinum wires ex-
hibited a nickel grid, and a Ziegler, latter
having ZnO, freshly prep. on a Mg foil.
The oxygen-conductivity on the anode
i.e. some anti. dissolve the metallic
hydroxide, the solution effuses out of
the pores of the grid, and the
metal hydroxide is again precipitated
out of sol. by the still unoxidized electro-
lyte.

Nov & Dec 1902.

Experiment in Fume Palace
 No. 38882, Sept 25 '88.

Examples on Bollenia, having
 unchangeable Glaucohyta:

Zn:	Phosphate of Potash & Soda	Phosphate
	Bicarbonate	Ca Bicarbonate
	Silicate	Silicate

Active masses to be passed
 into self-supporting cakes or to be
 packed around cores a sheet
 of either metal, and wrapped
 in sheet asbestos, prepared ready
 for patent of Jan 26 1903.

Dec 16. '02.

Sheets of the following metals:

Cu
Fe
Ni
Pt
Ag

Size $1 \times 1 \frac{1}{2}$. put on Anodes in
panset K₂SO₄ 20%, and run at .2 amp.
The K₂SO₄ are power $\frac{1}{4} \times \frac{3}{4}$ of sheet
position run.

After 24 hours run at the density of .067
amp per square. The deposits on the
K₂SO₄ are dissolved of in dilute
HNO₃ (in case of iron Anode, in HCl)
and K₂SO₄ is added till precip. is formed.
(in case of Ag. HCl is used).

Pans washed in filter & squared.
2 mg. deducted for weight of scales.

From Cu

- Fe 10.8 mg 7.5 mg net iron.
- Pt 3 mg appears to be all iron.
- Ag 16.5 mg 12.5 mg net Ag

After 10 days. Copper ext. into two pans.
Silver bathside shows a big bunch of
Hempy like. Iron K₂SO₄ is well &
anode covered with black solution purple
and blue powder at bottom of glass, behind
the 3 cm.

Nickel K₂SO₄ and Anode, as well as
Pt bath & anode perfectly bright, and
no precipitate.

Jan 6. 1903.

Preliminary experiment measuring current
for Winkler Anodes.

Copper and Silver amalgamate too easily
to be employed for contact surface of
these types. Nickel and Iron amalgams
may be ready to be run in open
atmosphere, in which case I may have
to make contacts in H₂O.

A piece of sheet nickel weighing
2.665 g, and a piece of sheet iron of
about the same surface and weight
2.43 g, are cleaned, amalgamated w.
Lithium amalgam and put into
mercury on Jan 7. by noon time.

Jan 7.

30 mg of the sample of graphite, not
milled by Jung, and stated to be
of the graphite employed by him in
his accumulators of 1891 — and 24 mg
of the Edison Graphite, put into glass
rings of 2 cm diameter and a number
scrap disks. The flaked S. graphite shows
a superior power of covering on rough
estimate 6-7 times the covering power
of the Jung graphite.

Jan 9



Mechanically all right, keeps
mercury. Wheel and ring are
originally nickel plated but the
coating did not be satisfied to get surface
here

9



All contact parts of
iron. The arrangement
will allow measuring of

of resistance or well

Sample of
Copper amalgam readily and
in course of long continued use.

Jan 10

A small sheet of iron same
size as those used in exp'ts of Jan 7
amalgamated w. Sodium Amalgam and
worked in Mercury. Weight before
treatment 3.7500gms. The mercury
is evaporated off in oxidizing flame
Weight after treatment 3.7465.
Hence loss of weight by regular
amalgamation 5mg.

10 Piece of sheet iron: 3.8300 mg and
piece of sheet nickel 2.8000 mg amal-
gamated by means of sodium and
iron and immersed in mercury.
Put on steam plate and heated.
Temp. about 51°C.

14 After looking at that temp for 4 days
pieces heated to drive off the Hg.
Weight of the iron 3.6750 mg.
nickel 2.8000

15. Nickel from Nickel Sulphate, polished
into mercury, in order to try
oxidizing properties of the amalgam.

I have found that iron and nickel
surfaces carefully cleaned and amalga-
mated by lithium amalgam & drops of diluted
acid, and again well worked very soon
after few minutes. Iron dull and

and lose the property of combining
with mercury. This may be due to
oxidation or to action of the
mercury, a bit. It cannot well
be due to action of the mercury
with metal, as this would necessitate
a steady consumption of the metal
unless excess of Hg is present - which
does not exist as shown by preceding
experiment. Thus, this phenomenon must
be due to an oxidation only, the
metal, Fe & Ni, being in an easily
attackable state in the amalgam.

A piece of sheet nickel, treated
as stated above and kept in a
sealed bottle, partly filled with
pyrogallate of Potash in 20% KOH,
remains bright and mercury-like
for months.

In a similar dynamo, the
the contact surface, if once well
amalgamated, may be kept
bright for any length of time
provided that the machine can
be so constructed that these
surfaces are working in H, N, and
O₂, and CO.

- During the very few facilities in the
line of the preliminary exp'ts, I
never was able to get any reliable
data on the resistance of a moving
mercury contact. It should be
a function of mechanical precision
only. - When Hg is kept clean
and free on time, the mechanical

April 2.

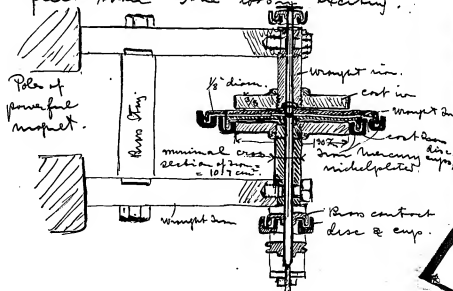
resistance, as shown by armature
very very slight.

The manipulator was taken up several
times with long interruptions. The
interesting idea was the following.

The conductor is moved in a strong
field; when current is taken out
there is of course a mechanical
recoiling force of corresponding order,
and if field is left free to rotate
it does so, nearly synchronously
with the armature. If the field
is fixed, however, does there not then
exist a tendency to rotate the
magnetism of the field? and at
such rate, that the work done
in the armature + the external work
of the armature current equals the
work done by eddy currents in the
field? I have all the time been away,
that so may not be the case, and
that so may look upon lines of
force as too concrete; for a rotation
as mentioned, should involve no change
of magnetic potential, anywhere on the
field.

Of on the other hand, such rotation
and such loss of energy really takes
place and if this loss is not
certain anyhow let you under the
name of armature reaction, then
I have a good clue. By arranging
two concentric (in case of discs,
parallel) armatures, and turning the
at the same speed in opposite
direction, such the current con-

necting them in series. This
reactive relative force is moderate,
and there is no other loss in the
field than the loss existing.



The experimental manipulator dynamo
was built as shown - rather.
Owing to the small dimensions of the
discs, these were magnet and armature when
released from the chuck of the lathe,
and I was unable to straighten them.
Thus the most important defect of
the machine consisted in the eccentricity
of the contact edge of the discs
and the resulting burning out of the
mercury at speed exceeding 800 per min.
or even less.

Assuming a density of 10000 lines
of force per cm² in the minimum
section of the magnet iron circuit,
then mean induction in the airspace
and armature will be:

$$\frac{10.7 \cdot 10000}{\pi \cdot 12} = 1300. \text{ which is a good}$$

dead loss than desirable in efforts within wide range. It is the old experience: we want to use old pieces and build cheap, for fear the new is too high, and the result is deficient apparatus & incomplete efforts.

Running as a motor, the armature accelerates till they reach speed too high for the mercury contacts, rubbing past the Hg and breaking the contacts. The current was on the neighborhood of 120 k. At an air induction of some 8000 Gauss, the efficiency might have been within reasonable limits; at the above stated induction, the force was very slight.

The following efforts disproved my theory
1) Magnet not excited, armature a coupling 60-80 amp and rotated about 500 rev, showed no trace of potential at terminals of armature b. (Insulation needs 1000V and shows 10000)



Hence the mutual induction is negligible.

2) Magnet excited, other condition as 1), no voltage in the stationary armature & no great tendency of same to rotate. 1500 Amps in armature & about no effect in b.

Conditions were varied and effort repeated numerous times with same results; it may therefore be considered established that no rotation of the full magnetism takes place. (Pathological mistake!!)

Experiment on concentration
change and concentration capaci-
ty of the Edison Electrodes.

May 9 '05.

Weight of Ni-Electrode w. in good
single pint, 14.25 g. (Wet weight dried
After boiling in pure water, under
27" vacuum for 1/2 h., surface wiped
off w. filter paper, weight 11.69 g.
Increase due to absorbed water:
2.56 g.

Weight of active mass.
Approximate volume of enclosed,
pressed briquette.
Porosity: %.

Edison Electric
Integrating Meter. Labrio 868.

1) Test of Norway Iron core,
well annealed, - $5\frac{1}{8}$ " long, $1\frac{1}{16}$ "
external diameter $\frac{1}{16}$ " walls.

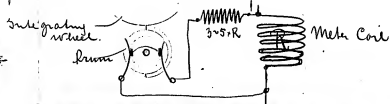
1.	4.50 Amp.	1210 Deflection	26.	3.085 Amp.	957. Deflection
2.	4.25	1185	27	3.00	935
3.	4.00	1045	28	2.90	912
4.	3.75	1104	29	2.75	881
5.	3.50	1050	30	2.60	841
6.	3.25	1000	31	2.50	816
7.	3.00	944	32	2.07	658
8.	2.75	883	33	1.78	572
9.	2.50	815	34	1.53	485
10	2.77	875	35	1.33	405
11	2.70	905	36	.93	2585
12	3.00	920	37	.72	1770
13	3.25	980	38	.50	1130
14	3.12	961	39	.37	695
15	3.00	937	40	.24	66
16	2.90	912	41	.16	4555
17	2.75	882	42	.094	37.
18	2.65	855	43	.068	35
19	2.49	815	44	.058	352
20	2.67	850	45	.046	33.
21	2.765	871	46	0	31
22	2.91	904	47	.041	33
23	3.00	925	48	.0792	34
24.	3.21.	948	49	.100	35
25	3.26	980	50.	.210	75

over.

Continued

No	4.00 Amp	7.70 Deflection	75	2.75 Amp	8.75 Deflection
51	.50	98	76	2.88	887
52	.61	125	77	3.00	914
53	.79	199	78	3.14	946
55	1.15	305	79	3.255	9655
56	1.50	436	80	3.12	948
57	1.80	580	81	2.98	920
58	2.065	640	82	2.84	887
59	2.45	767	83	2.75	869
60	2.50	779	84	2.62	836
61	2.67	826	85	2.57	809
62	2.77	854	86	2.63	830
63	2.76	900	87	2.75	860
64	3.05	910	88	2.83	890
65	3.16	949	89	3.00	914
66	3.30	979	90	3.14	945
67	3.12	949	91	3.25	971
68	3.00	9235	92	3.41	1020
69	2.86	895	93	3.41	1017
70	2.75	870	94	3.62	1040
71	2.62	836	95	3.83	1100
72	2.50	8045	96	4.20	1155
73	2.52	805	97	4.55	touch
74	2.63	830	78		

The curve shows that the difference between the readings on varying and damping curves can be reduced to ca 30% of the original by shunting $\frac{1}{2}$ of the current through a resistance parallel to the main coil - once for each revolution of the drum.



The drum would in this case have to be conical, so as to prevent the integrating wheel from sliding when the shortcircuiting takes place. This would be at the instant, when the edge of the wheel enters the shaft edge of the elevated part of the drum.

Supposed that the meter is adjusted for the mean curve of deflection, and the lights in the house are lit and turned out as follows:

1 Hall light	turned on at 4.00 pm	1 light
5 Kitchen lights	-	5.00 4
5 Porcelain	-	5.00 9
5 Living room	-	6.00 14
"	turned out	8.00 9
3 Kitchen	-	9.00 6
6 Bedroom	-	on 11.00 12
5 Porcelain	-	out 11.00 7
All out	-	12.00 0

Total 66 light hours
The meter is built for 25 light hours.

According to the curve, the meter would indicate:

1 hour	at .875 light	= .875
1 "	" 8.725	= 8.725
2 "	" 13.600	= 27.200
1 "	" 9.200	= 9.200
2 "	" 6.250	= 12.500
1 "	" 7.250	= 7.250

Total 65.750 light hours
The meter would consequently charge for 99.55% of what was used.

Example of a most unfavorable case:

2 hall lights on at 4 th (2) =	2 light hours
3 Kitchen " " 5. (5) =	5 " "
6 Parlor " " 5. (11) =	6 " "
6 Dining room " 6. (17)	68 " "
6 Bedroom lights at 10. (23)	<u>46</u> " "
All out at 12 o'clock (10)	<u>127</u> " "

The meter integrates:

1 hr at 1.870 = 1.870 Light Hours

1 " " 10.625 = 10.625

4 " " 16.500 = 66.000

2 " " 22.675 = 45.350

Total 123.845 or 97.45%

This means a loss of 2.55%.

The maximal consume of energy in meter is 2.5 Watt.

This corresponds to a current (at 110V)

$$I_{max} = \frac{2.5}{110} = .0227 \text{ Amp.}$$

Plot of Mica, model 2, Nov 190

Mica insulation, two heli-coils,
and stator coil all in series

Resistance of stator coil: 2790 ohms
heli coils { ~~4400~~ 6291
Insulation 454
9540

Current at 110V: .01162 Amp.

Test of Electrolytic Iron-core.

A sheet-iron-core of 1 3/8" diam and 67 1/2" length is given a coating of 1/8" to 3/4" of iron, plated out of double chloride of iron and ammonia.

The complete core is very much heavier than the Norway iron one and can consequently not be compared with latter except as for percentage of "hydrogen" concerned. ~~What~~ The thickness of the coating exceeds for this steel too much in all directions - probably on reason of change of temperature and difference in coefficients of expansion of the two materials. These cracks ~~help~~ increase the magnetic resist.

	5.45 Amp	1210 Deflection	26.075 Amp	111 Deflection
1	5.00	1197	27.105	126
2	5.00	1197	28.145	142
3	4.69	1170	29.180	156
4	4.48	1145	30.25	185
5	4.05	1132	31.385	237
6	3.95	1129	32.50	283
7	3.80	1043	33.67	343
8	3.6	959	34.78	380
9	2.51	836	35.95	430
10	2.00	723	36.105	458
11	1.59	638	37.130	576
12	1.32	537	38.150	571
13	1.31	525	39.178	630
14	1.025	456	40.218	700
15	.84	396	41.227	730
16	.69	350	42.249	776
17	.55	285	43.322	800
18	.44	243	44.380	960
19	.335	198	45.400	1011
20	.25	181	46.434	1081
21	.173	131	47.470	1109
22	.115	120	48.500	1140
23	.08	111	49.541	1176
24	.072	79	50.588	1201
25	.0-			

Le curve:

The Hypsometer is about 4 times higher than in the Norway case.

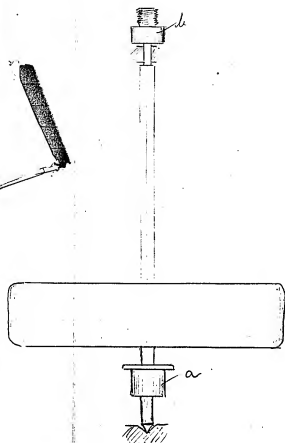
- What is the advantage of a hollow tube over a thinner of wire of same weight and same material?

Electrotype tube null answer

	6.85 Amp	1210 Deflection			
1.	6.23	1188	23	.075	97
2.	5.78	1143	24	.160	103
3.	4.98	1083	25	.270	183
4.	4.67	1080	26	.320	161
5.	4.26	1070	27	.530	200
6.	3.97	980	28	.695	220
7	3.80	887	29	.720	254
8	2.69	774	30	1.00	297
9	2.29	680	31	1.26	305
10	1.88	509	32	1.53	44
11	1.57	575	33	1.77	453
12	1.26	445	34	2.40	603
13	.98	360	35	.47	667
14	.79	307	36	3.07	707
15	.645	259	37	3.78	830
16	.586	222	38	4.81	893
17	.510	180	39	4.69	940
18	.476	140	40	4.95	976
19	.450	104	41	5.76	1057
20	.375	82	42	6.36	116
21	.3	56	43	6.72	1176
22	0	066			

Le Curve
This curve is lower than last

Force required to move
Mater motor of $3\frac{7}{8}$ " Diam. (98.5%)



a) The Force attacks on 6.35" lever
Pulley off.
7) applied to start and bring
the motor up to regulating speed.
This corresponds to a force 1.82g
on the periphery of the armature.

b) The Force attacks on the little
cylinder b. i. e. 8.75" lever.

1) Pulley off.

5.3g is sufficient.

This point of attack is nearer
to the long bearing on top
whereby the bearing friction is
slightly increased.

7g on 6.35" lever corresponds to
5.32g on 8.75" lever.

The increase of resistance is 8.4%

2) Pulley on.

Mater starts 9.2g

After subtraction of 8.4% fr. friction:

8.4g on 8.75" lever.

Reduced to the circumference: 1.5g

c) Thread is attached to a point
of the armature, $1\frac{1}{8}$ " from centre:
(41.3 mm)

Mater starts by 1.7g

Reduced to circumference: 1.45g

The Friction in the Pulley is
found to be: 1.5%.

Corrected results:

b: 1.475g } on 49.25" lever.
c: 1.45g }

The Motor requires force in cal/cm
hence the force required:

$$\frac{4.75 \times 1.47 \times 2 \cdot \pi}{1000 \times 1000 \cdot 0.001} = \frac{70.8}{1000000} \text{ m/kg}$$

$$\text{or } 7.5 \times 10^{-7} \text{ Valt.}$$

Approximate test of Replication
Time required for 26 Revolutions
at following Torque.

7g on 0.35 Zn	3 3/4 sec
11 " " "	3 5/8 "
21 " " "	3 1/2 "

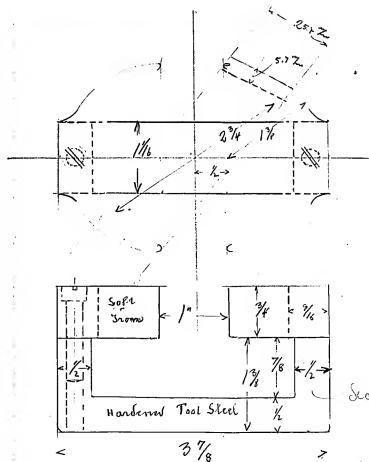
Determination of Distortion in
new permanent magnetic field.
(See Table)

As anchor is used a piece of
soft iron 1" by 1/2" by 6 3/4", placed.
Surface of contact between field
and anchor: $5.7 \times 2.5 \times 2 = 145 \text{ Zn} = 145 \text{ cm}$

The Lifting Power is measured at immu-
diate contact and when layers of
different thicknesses separate Poles
and Polepieces.

Magnet was originally magnetized
by 7000 Amp. Turns.

The lifting power must have decreased
to about 1/5 or 1/10 of saturation.



0.	Lifting power at immediate contact.	1850
.00225	- when .00225 paper on one pole.	1697
.0045	- " " " each	897
.00675	- .00225 and .0045	697
.012	- .006 " .006	382
.022	- .011 " .011	105

The correct Distortions in the surface
of contact calculated as follows.

$$P = \text{Lifting Power} \quad F = \text{Surface of Contact}$$

$$B = \text{Distortion} \frac{\text{Lifting Power}}{\text{Surface of Contact}} = 1.45 \text{ cm}$$

$$P = \frac{B^2 \times F}{8 \cdot \pi} \quad B = \sqrt{\frac{P \times 8 \cdot \pi}{F}}$$

Distortion in Hardened Horse shoe

$$B = \frac{1.45}{5.11}$$

	Airspace, P	B	Magnetic Inductive Force in Airspace
1	0	1730	5750
2	.00285"	1100	4400
3	.00450	900	4000
4	.00675	700	3500
5	.0120	382	2600
6	.0240	105	1360

	New Series		
7	.012"	440	2800
8	.024"	180	1800
9	.036"	100	1330
10	.048"	70	1110
11	.020	200	1900
12	.065	88	1250
13	.088	63	1050
14	.155	326	760

The last 3 Values are more exactly determined. The calculation however does not hold good as the section of the Airspace is indefinite on reason of leakage or spreading.

Supposing now, that, in Expt 3. 70% of the Magnetomotive Force is destroyed in the airspace, the total M.M.F. must be:

$$(430 + 254) \frac{2}{3} = 120.$$

In Expt 1 there 140 are all used to conquer the Resistance in the steel, and 70% of which must at the steel must be at least 80%.

The Induction in this case: 5750 is undoubtedly in the straightest part of the curve, so that below that point the magnetic Resistance may be considered constant.

The Permeability is $\frac{5750}{110} = 48.$

In case of the new Passing the armature is steel, the area at the Airspace is approximately $[(8 \cdot 275 \pi) \cdot 3] \cdot 0.5 \cdot 0.75 \cdot 0.645 = 3 \text{ cm}^2$
 Section of Steel: $1\frac{1}{2} \times \frac{1}{2} \cdot 6.45 = 3.5 \text{ cm}^2$
 The Airspace is chosen: $\frac{1}{1000}$ on each side, in all 0.05 cm .

$$\text{M.M.F.} = 130 = (.05 B + \frac{B}{\mu} \cdot \frac{B}{\mu}) = B(0.05 + 0.0453) = 0.0953 B.$$

$$B = \frac{130}{.095} = 1270.$$

$$B \text{ in Steel: } 1270 + \frac{B}{\mu} = 2300.$$

Average induction in ^{4th} Airspace is $\frac{1270}{2} = 615.$

Required number of Wires per pole is that if .0222 is the maximum current and the Force required on 35% lever 2.2g.

$$2240 = .0133 \cdot 615 \cdot n \cdot \frac{66}{32}.$$

$$n = \frac{2240 \cdot 86}{616 \cdot 0.033 \cdot 615} = 342.$$

Or, as the Armature has 24 slots

$$n = 360 = 15 \cdot 24.$$

Wire no. 30 (B&S) has 2450 feet to 1 lb
when double cotton covered.

30 has 2000' to 1 lb.

The Prices per lb.

30 30
\$ 2.07 \$ 2.93 , and perfect:
\$.0845 \$.0705

36 wire carrying .025 Amps covers
to 2 Amps per 1/2" - which is perfectly
safe.

The turn will be about 2.5" long
800 turns 750 inches = 75 feet
costing 5.3 cts

One slot will be able to hold
ca. 250 windings - the whole arma-
ture 6000 or 12500 with 5000 turns.
Resistance will cost ca \$.80.

According to calculation the current
would be .0013 Amps. and the magne-

$W = .143 \text{ Watts}$

Will start in with ca 3000 Windings
and unwind by steps - noting current
needed in each case.

March 14th
'01

It was found that on reason of
the ~~thin~~ narrow air gap the armature
could not move smoothly; the magnetic
friction caused a very high loss of energy,
which could only be diminished by increase
of air gap.

The magnetic flow in motor has evidently
been estimated too high - most probably
on reason of poor contact between
magnet and polepiece in lifting exp.
(which causes higher saturation due
smaller surface and this gives wrong
results for B from in P. $\frac{B \cdot S}{H \cdot l}$)

The armature was first wound with
24,000 windings and required about 30,000
Amps at a speed of 120 rev per min.
The new winding has 24,000 turns
requiring .17/1000 Amps at 120 rev.

In neither case the armature
runs perfectly free and smooth -

evidently poor mechanical finish.

In practice the field magnet would
be cast in one piece and consequently
by give a much higher MMF.

Test of different shaped iron cores

I Oct Shell		II	
Height	Deflection	Height	Deflection
4240	1200	4850	1175
5700	1077	4150	1057
8140	963	3664	951
2370	760	3091	824
2530	450	2570	681
1660	524	1906	415
1260	400	1431	350
920	293	940	232
800	220	740	150
430	105	440	144
250	130	250	120
100	116	100	110
0	111	0	109
100	116	100	111
250	125	250	116
570	160	570	144
820	230	720	184
1120	318	1430	335
1570	434	1990	570
1990	605	2820	769
2110	673	3600	934
3040	925	4040	1027
3830	1057	4700	1163
4100	1151	0	105
0	110		

Both cores have about same weight
The difference between the curves must
be due to the difference in air surface
and magnetic saturation when the
lines of force pass from iron to
air.

III Core II cut to 5" length and lowered

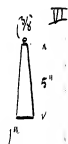
Height	Deflection	Height	Deflection
0	110	230	117
3670	1233	470	181
3120	1050	760	150
2370	753	1000	196
2150	570	1570	347
1520	343	1650	525
930	200	2970	1010
750	155	3520	1185
480	131		
230	117		
0	114		

Poor start on reason of long
path through top of solenoid.
Rapid increase on reason of higher
saturation caused by decrease of weight.

IV Same, lowered 5/8" (1/16" higher than in III)

Height	Deflection	Height	Deflection
4050	1050	4710	1202
3570	966	4120	1101
3020	870	3740	1055
2320	670	3120	920
1800	570	2350	661
1450	382	2000	522
1000	239	1410	284
600	160	980	165
250	124	250	85
0	113	0	57

Both show rather poor start.



Tapered Core, highest possible position

M.A.	Defl.	
0	5	Start too weak. and
4500	1112	lost part of curve too
3900	1055	rounded on reason of
3400	895	short core.
2850	752	
2140	526	
1750	399	
1340	279	
970	170	
720	135	
480	76	
250	26	
0	65	

VII 1/2" cut off top
and replaced by
1 7/16" of core II.
Highest position.

M.A.	Deflection	
0	50	
4500	1140	
4000	1002	
3400	977	
2900	780	
2250	550	
1750	415	
1400	289	
1000	190	
500	74	
250	69	
0	54	

VII is considerably

better. Would prefer to
obtain same results if
core was below - requiring only
half the weight.



A broad collar as shown in fig
does not require a wider solenoid
and increases at the same time
the air surface of the lower part
of core, thus diminishing magnetic
resistance and making same less
dependent on length of free core
below solenoid.

VIII

Mile amp Deflection

Mile amp	Deflection	
0	50	Beam made more
4000	1165	sensitive in this app.
3500	1000	Considerably better curve.
2900	900	
2200	871	
1700	471	
1300	340	
1000	245	
500	107	
250	55	
0	58	

The Solenoid used in all these
exp. has for each side of 3 wire
system 450 turns of no 16 wire.
Arranged thus:



Length 3 1/4"

This depends on
a number of factors
of the iron pieces.
The coil has twice the
current arranged in (Solenoid)

New Solenoid: 15 turns for
each side, length 1 7/8"



at b a b a a b.

The old VIII gives a very poor
start in this solenoid.

The rotation of the core goes on
as follows:

Core VIII load all through to
half its diam. Beam hardly deflected
at 5 Amps. In case like this
no complete test is made

continued 107

2. HP. Automobile Motor.

Columbia Remount Motor, originally wound for 55V. Rewound in Lab for 40 V.

The armature has 51 slots each containing 8 Wires, belonging to two windings of 4 turns in series.

When rewound each winding has increased two circuits of 2 turns of same size wire (#11)

Resistance of rewound armature:

$$\frac{.28V}{9.6A} = .0292 \text{ Ohm}$$

Including Brushes:

$$\frac{2.03V}{17.2A} = .150 \text{ Ohm} \quad \frac{1.58}{10.6} = .149 \text{ Ohm}$$

The field winding (#7) earlier having 4 coils in series, now arranged in groups of two, has a resistance:

$$\frac{.75}{32.4} = .0355; \quad \frac{.51}{16.4} = .031 \text{ Ohm}$$

For the following breaking exp. the motor is connected to one of the old sets of distribution. On reason of high internal drop of voltage in these the motor does not get the proper voltage and consequently shows a rather low efficiency. Efficiency of Fulling 67%. Arm of Brake 23%.

Voltage	Current	Speed	Wight	Wattmeter	Efficiency	Remarks
1. 27 V.	74 A.	575	5 lbs.	1940 W.	1.14 HP	.44%
2. 33.5 -	63 -	900	45 -	2111 -	1.83 -	.695%
3. 32 -	60 -	944	(47.25)	1920 -	2.27 -	.85% 2 Series of 2 Turns of Brake in Parallel
4. 30 -	98 -	897 -	1205 -	2940 -	2.72 -	.95%

The corresponding drop of voltage in motor at total resistance. 17%

(1) 17.3V., (2) 11.35 (3) 10.8 (4) 17.76V.

This shows that drop in battery is low.

The brake gives me very exact results, ~~some~~ Torquemeter is applied and speed is variable.

Has sent from Simon Amable 20
4 quarts of bundles of same size and
shape as the carbon bundles used in
previous exp.

After long and heavy runs they show
a perfect contact surface, but at
100 Amps. and more, no trace of
sparking can be seen.

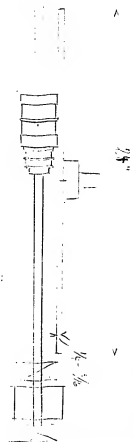
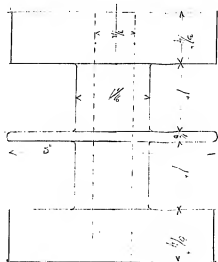
- Another run without load.

	Volts.	Amps.	Rev.	Watts.
1)	38	80	207	304
2)	62	84	610	504
	63	80		
3.	86	82	855	71
	88	81		
	98	84		
4.	99	84	1123	83.
	100	83		
	101	82		
	102	82		
5.	104	83	1280	85.3
	104	82		
	105	82		

Motor loaded by Pasche used in
previous exp. - Tachometer used.
The weights given in following
table has to be added the weight
of spring balance. 10 g.
Order of brake is in, fully down
6 3/4"

Voltage.	Current.	Speed.	Weight.	Watts Consumed	H.P. Delivered Efficiency.	
1 41	94	700	10	3854	4.27	82.7%
2 42	94	950	8	3945	5.64	68.6%
3 43	84	—	—	3612	—	—
4 43	100	850	12	4300	4.6	83.2
5 42	97	830	12	4074	4.8	85.2
6 41	105	—	—	4365	—	—
7 42	82	950	8	3444	3.53	78.6
8 42	81	—	—	3402	—	—
9 43	75	—	—	3225	—	—
10 42	75	1000	7	3150	3.39	86.2

	Village	Current	Spec.	Weight	Water content	HF reduced	Efficiency
1	21 (water)	23	1520	~	462		
2	24 (water)	27	1250	1	646	.86	2
3	42	73	1000	6	3060	2.94	71.6%
4	41	85	900	8%	3480	3.65	78%
5	New Baku						
6	30	20	1225	5 1/2	149	.585	72.5%
7	42	30	1520	1 1/2	1260	1.3	77%
8	41	34	1520	17 1/2	1590	14.15	66.5%
9	41	34	1450	19	1600	1.5	70%



Experiments on Aerographic Speed Controller for Automobile

The rotating magnet is of machine steel and has about 240 turns of #14 wire.

The disc is also machine steel. During the turning of the face of cone the edges have sprung back, so that the finished face is a concave surface of ca. $\frac{1}{16}$ " depth.

The back of disc is not finished this causing a variation in thickness of disc of about $\frac{1}{32}$ " maximum.

The rotating magnet slide on a $\frac{1}{16}$ " shaft and is prevented from turning relatively to same by a key sliding in a long slot.

The collar in middle of magnet is rounded on the edge and extends $\frac{10}{1000}$ " beyond the legs of the magnet, thus giving an airspace of $\frac{17}{1000}$ " between magnet and plate disc.

Resistance of winding: ca $\frac{1}{4}$ ohm

Experiment.

The magnet is axial and locked and the force required for keeping the disc slowly rotating rest by a spring balance. Collar of magnet is $\frac{1}{8}$ " from centre of disc and the Balance is attached to a binding screw on periphery of disc, $12\frac{1}{2}$ " from centre.

	Current	AW	Pull on 12 $\frac{1}{2}$ "	"Bite"
1) 1 cell	7.4 amp	960 lb	6.5 lb	10 lb
2) 2 cells	12.2	1920	10.4	13.5
3) 3 "	12.1	2880	12.4	15.5

Setting the Magnet rotate. at rate
of 1575 per min. it will transmit
of 1) .435 HP 2) .59 HP 3) .675 HP

By using thinner wire (which, when
insulation is left out of consideration,
gives same number of Amp turns)
the torque used for the friction
might be reduced to any degree
- All other magnitudes, surface speed included,
being constant, the pull of the
magnet will be approximately
proportional to the diam. and
the length of magnet, and to
the square of the saturation
in ampere

The shaft is $\frac{9}{16}$ " in diam. and
further weakened by a good sized
key seat. The lead screw in the
new - and still more so especially
of the axis of gravity - makes
the magnet rotate noticeably during
run. The tendency for unbalance
of the plane of rotation causes
vibrations in the disc of varying
thickness, these being further supported
by the springy steel.
The pull of the magnet does
not suffice to keep same and

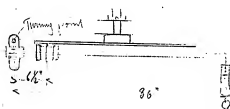
disc in permanent contact, and
consequently will the disc ring -
at high speed and when magnet is near
the edge with an awful strong
sound, audible inside of the other
building.

The means for improving this
are evidently 1) to balance magnet
perfectly - 2) use a thicker shaft
and arrange key seats symmetrically
so as to allow balancing at shaft.
3) apply a heavier disc, preferably
of wrought iron.

This experiment is far from being
a fair test of the practicability
of the idea.
After a very short run the whirling
magnet passed the narrow collar
deep into the disc giving rise to
an appearance of a polygon -
and the effect of a polygon.

Magnet bored to $\frac{5}{8}$ " diam., revolved
with 340 turns of $\frac{2}{16}$ wire and
carefully balanced and mounted on shaft
with a sufficient large disc of
wrought iron could not be obtained,
a new one was cut out of $\frac{1}{2}$ "
soft steel and finished on both
ends to $\frac{3}{8}$ " thickness.
This disc is perfectly plane, not concave.

The test at rest gives following results



1) 1 lb. 2 lb. avg.	530 AW	12 1/2 lb. Pull	39 lbs. Attach.
2) 2 lbs. 42	1430	10 1/4	57
3) 3 " 63	2170	12 1/2	69

The "Bite" is found to be:

	23 Avg.	Pull on 12 1/2"	Bite (at 10")	HP at 1570
1)	23 Avg.	12 lb.	8.6 lb.	
2)	42	11 "	13.5 "	.57
3)	63	12 "	14.25 "	.62
4)	63 - stroke to slide at 17:	21 "		.42

In this case the little collar is case-hardened. The coefficient of friction is 20%.

The vibrating and ringing is very much reduced, still not all together prevented, as this disc after short run shows same symptoms as the previous one indicating the ringing steadily increases.

The most serious objection seems to be the rapid wearing off of the surface of contact. The collar may well be made too hot, but even at perfectly smooth run the disc will get out of step as the breadth of collar is increased and the pressure quite high, as well as a sliding can not be prevented by change of

speed.

Even very short vibrations reduce the useful life to such an extent that only that during run gave no units

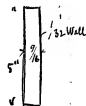
Mile Experiments continued from
page 119.

X Upper 1" of II bored out being
 $\frac{1}{32}$ " wall.

XI Upper $1\frac{1}{2}$ " bored out.

The object of this is to obtain
a higher saturation in part of the
core at the very start and this
do away with the dead part of the
curve. Works fairly well, especially
after wall of upper part is diminished to $\frac{1}{32}$ "

XII



Current Deflect.

0 123
250 135
585 155
1060 176
2000 338
2450 406
3200 520

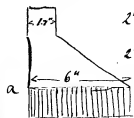
Same
with
Cellar

0 112
240 120
580 149
1040 219
1540 313
2120 437
3060 664

XIII

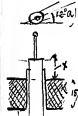
Thin piece bent out of $75/1000$ Armature
 saw. Two inches from bottom
 the core is cut into $\frac{1}{8}$ strips and
 these spread out like an umbrella.
 This core evidently has too little
 iron.

XIII



2" development of core.
 2" core is rolled from b.
 This core is very light and
 is readily attached by the
 cast iron frame of meter
 where it is located in lower end by
 a brass weight.

The core can be raised and lowered
 delicately to beam so as to adjust
 the free surface above solenoid to
 start.



$x = \frac{1}{2}$, lowest position.

0	100	250	568
500	193	270	668
750	209	355	818
1000	278	418	1085
1550	400	485	175
1750	475		

Curve nearly straight

Irregularities in Curve due to magnetic
 properties of cast iron of meter. Which
 is entirely too near.

b) $x = \frac{1}{4}$ same Deflect.

0	100	1500	400
250	144	1700	568
500	185	2500	732
750	230	3000	907
1000	266	3120	1150
1500			

c) $x = \frac{7}{8}$.

0	100	1500	345
250	132	2000	528
500	166	2600	385
730	240	3150	1120
1000	260		

d) $x = \frac{1}{8}$ highest position.

0	100	1500	425
250	125	2000	670
500	155	2500	954
780	195	3000	1145
980	235		

May 2nd. 1907.

The thin sheet iron core had to
 be abandoned, as the strong gentle
 high induction unit. core gives straight
 curve were inseparable from high
 induction and different deflections at
 ascending and descending runs.

The best results so far are obtained
 on a core 5 in long. $\frac{9}{16}$ position and $\frac{1}{8}$ roller
 with on $\frac{1}{8}$ cell at the lower end.

1.58	Imp in heavy coil, Imp in fine, Defl: 2059	
1.53	- - - - .0192	202
1.47	- - - - 0	205
1.07	- - - - -	208

$$\frac{.43}{.53} \cdot 87 \cdot \frac{113}{182} = .662.$$

The starting coil has a relatively strong action at lower currents. This probably being due to the large diameter and consequent low density in an at low positions of core.

The correction of currents will therefore be too small at lower positions and ought to have the equation.

$$I_c = 5 + \frac{(193 + i)}{183} \cdot .6 + \frac{a}{5} \cdot \frac{(180 + i)}{183}$$

where a is some small fraction

The preceding table are corrected by means of the formula

$$I_c = 5 + \frac{6 - 183}{183} \times 0.6.$$

The values taken at intervals of 5 min were to determine whether the core by accidental pulsations of current and pendeling of beam tended to approach an average position between ascending and descending curve. On 3 cases out of 4 in the descending curve it really shows such tendency.

May 25

The starting coil is fed from 3 Storage cells in order to keep the current constant. The milliammeter shows during the whole run 180 - 187 mA.

Imp	Defl.	Current	Deflect.
571	1065	526	828
570	1010	522	1055

524 973

486 912

452 850

399 755

352 600

307 505

261 485

269 387

164 310

123 245

87 188

40 145

0 110

39 138

80 175

122 220

162 284

205 353

254 454

294 524

344 620

383 705

431 805

476 869

508 948

Very satisfactory Curve in all directions.

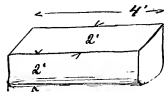
158

april 1883.

159

Was for precipitating
active material for Bakery.

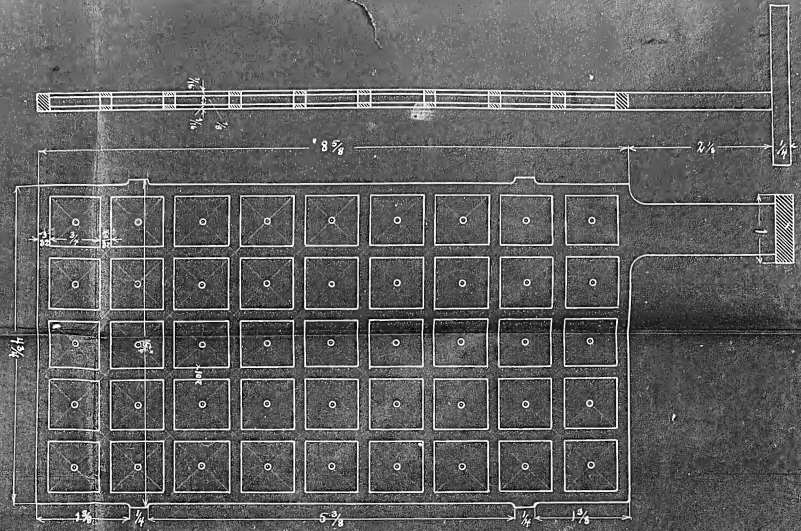
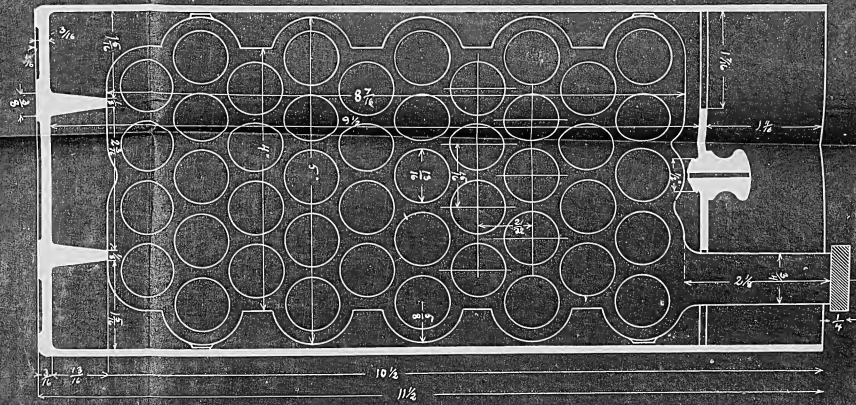
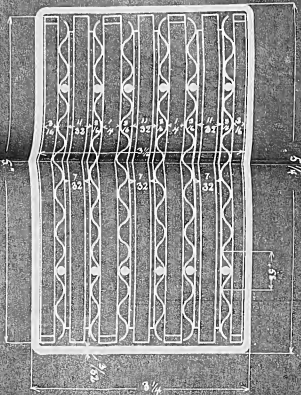
Size of Tanks: $2' \times 2' \times 4'$



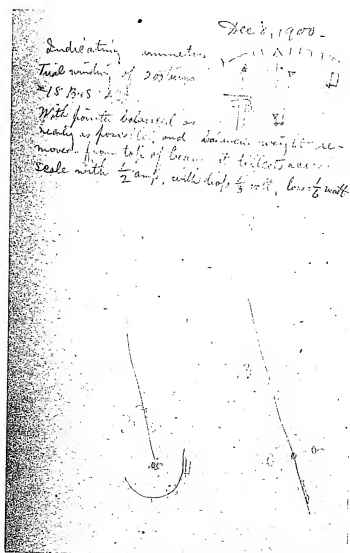
To determine the amount
of water required for washing
precipitates, tanks C and D were
thoroughly cleaned and filled by 10 lbs
of iron sulphate each. This was
piped by chloride, carbon KOH.

C was just neutralized - D was
given a slight excess of alkali.
The precipitates were each time
allowed to settle below lower
funnel then occupying 34.52 cu. in.
The water drained off every time
is 13824 cu. in.

“Chloride Accumulator”



[ITEM FOUND IN BOOK]



[ITEM FOUND IN BOOK]

Miller Experiment

Core 8"
away from frame
Same as in Core #1

May 6th, 1901

Curve #2

Same conditions as in case #1,
but more care taken with
the and more especially with those
on the Peduncular diameter.

Weight	Age	Sex	Notes
0.00	0	♂	18455 M L change
0.555	1	♂	21 ant. in change of white
1.475	2	♂	21 ant. + 17.5 mm
1.449	3	♂	
1.975	4	♂	
2.375	5	♂	
2.750	6	♂	
3.235	7	♂	
3.085	8	♂	
3.930	9	♂	
4.600	10	♂	
4.975	11	♂	
5.56	12	♂	other male reaching
6.08	13	♂	begin here.
6.37	14	♂	
6.37	15	♂	
7.37	16	♂	

[illegible]

**EDISON STORAGE BATTERY COMPANY RECORDS
SALES RECORDS**

These records consist of reports, correspondence, and printed material pertaining to the sales organization of ESBCo. The documents relate to the salesmen and operations of ESBCo as well as to relations with the Edison Storage Battery Supply Co. and Miller Reese Hutchison, Inc. The selected items are arranged in the following order: (1) daily and monthly sales reports (1910-1924); and (2) documents relative to the business of Miller Reese Hutchison, Inc. (1911, 1916-1918). Among the items not selected are a scrapbook of advertisements and promotional articles (1912-1914) and two in-house publications—*Storage Battery Transportation* and *Storage Battery Power* (1928-1958).

Sales Reports (1910-1924)

This folder contains daily and monthly reports, in a variety of formats, relating to storage battery sales. Included is information that pertains to orders received, cells assembled, and shipments made, as well as the details of billing and inventory. In addition to summarizing this data, the monthly reports provide information regarding the expenses, salaries, and sales of individual salesmen. Included are reports prepared by Harry F. Miller, H. G. Thompson, and F. R. Blair. Many of these reports were routed to Edison for his examination, and a small number contain his marginal comments. There are also letters of transmittal and attachment by Edison and H. A. Altengarten.

Miller Reese Hutchison, Inc. (1911, 1916-1918)

This folder contains documents relating to Miller Reese Hutchison, Inc., a corporation organized by Hutchison in 1916 to broker sales of Edison batteries to the United States government and the governments of other nations. Hutchison, who served as chief engineer at Edison's West Orange laboratory from August 1912 until July 1918, signed an agreement with ESBCo in January 1917 that licensed him to sell batteries for submarines, search lights, radio sets, and other purposes that did not include the propulsion of vehicles with wheels. Most of the items in this folder consist of memoranda by ESBCo executives regarding strained relations between their own sales division and Hutchison. There are also statements of the business done by Hutchison's company, minutes of ESBCo Executive Committee meetings, and descriptions of meetings with U.S. government officials. At the beginning of the folder is a proposed resolution from 1911 authorizing Hutchison to approve all bids and contracts involving ESBCo and the U.S. government. The authors include Edison, Charles Edison, Henry Lanahan, Stephen B. Mambert, and H. G. Thompson.

SALES RECORDS NOT SELECTED.

This collection of printed, promotional material consists primarily of ESBCo in-house publications and advertisements. Also included are several brochures and a collection of printed testimonial letters used for promotional purposes. Related material can be found in the Primary Printed Series.

Scrapbook (1912-1914)

This scrapbook covers the period February 1912-February 1914. The items affixed to its pages consist primarily of advertisements and promotional articles regarding the Edison storage battery. Included are clippings from publications such as *Automobile*, *Railway Electrical Engineer*, and *Amy & Navy Journal*. There are also a number of corrected page proofs and newspaper clippings, along with a few advertisements published by competing storage battery companies. Some of the clippings contain technical information regarding discharge rates, gaseous output, and the efficiency and durability of Edison cells. There are occasional marginal notations by Miller Reese Hutchison, Edison, and others, usually giving the date of publication. One competitor's advertisement contains an inscription by Hutchison—"These people continue to publish this ad. It should be answered by 'come on in the water's fine'" — and two notations by Edison—"All right, TAE" and "on Motor, TAE."

Publications (1928-1958)

Storage Battery Transportation and its successor, *Storage Battery Power*, were the in-house publications of ESBCo and its successor, the Storage Battery Division of Thomas A. Edison, Inc. Published on a monthly basis, these publications together cover the years 1928-1958. Each issue features different uses for Edison storage batteries, often by detailing the operations of a single industry or specific customers. The periodicals are heavily illustrated and, although their content is primarily promotional, a few issues include technical information regarding battery performance. The Edison National Historic Site holds many issues, beginning with January 1929 (Volume 2, Number 1). An index, compiled in 1941, covers the years 1934-1940.

**Edison Storage Battery Company Records
Sales Reports (1910-1924)**

This folder contains daily and monthly reports, in a variety of formats, relating to storage battery sales. Included is information that pertains to orders received, cells assembled, and shipments made, as well as the details of billing and inventory. In addition to summarizing this data, the monthly reports provide information regarding the expenses, salaries, and sales of individual salesmen. Included are reports prepared by Harry F. Miller, H. G. Thompson, and F. R. Blair. Many of these reports were routed to Edison for his examination, and a small number contain his marginal comments. There are also letters of transmittal and attachment by Edison and H. A. Altengarten.

A sample of less than 10 percent of the documents has been selected. The items selected are those bearing Edison marginalia.

W. H. H.

Dyer =

attly leave and these
Edison Storage Edison

Shipments Jan 25th to 28th 1819.00
60 A 4th 60 A 6th 2nd 1st

Shipments Jan 1st to 25th 34,079.27
202 A 4th 438 A 6th 2nd 1st

average shipments daily Jan 1st to 25th 987.1 cells

Orders recd Jan 25th A 4 = 7000

" " " " A 6 = 40

" " " " 1st to 25th A 4 = 1888

" " " " " " A 6 = 2090

unfilled orders A 4 = 3540

" " " " " " A 6 = 2250

average orders recd daily Jan 1st to 25th 1578¹/₈

Bank balances \$ 7914.39

collections during Jan 22,589.25

cells assembled Jan 25th 201 A 4

stock on hand ready for test Jan 25th A 4 = 1049

" " " " " " A 6 = 701

amt. Bill recd Jan 1st to 25th 28,278.28

EDISON STORAGE BATTERY CO.

Report of Invoices Issued,

January 25, 1910

3768	Lansden Co.,	60 A-4 Cells,	729.00
3769	Lansden Co.,	60 A-6 Cells, 1 Fillingoutfit	1090.00

1,819.00

EDISON STORAGE BATTERY CO.

Report of Orders

Date Jan. 25/10

	A-4	A-6
Orders on hand previous day	<u>3600</u>	<u>2270</u>
Orders received this day		<u>40</u>
" " " " to apply on contract		
Total	<u>3600</u>	<u>2310</u>
Shipments this day	<u>60</u>	<u>60</u>
Balance of orders on hand	<u>3540</u>	<u>2250</u>

A-4 A-6

Contract orders on hand

EDISON STORAGE BATTERY CO.

REPORT OF SALES AND CELLS ON HAND DATE Jan. 25, 1910

	A4	A6
Cells on hand previous day	1109	627
Cells assembled this day		134
Cells shipped this day	Total 1109	761
	60	60
	1049	701

SALES

	Balance on hand and ready for test
60 A-4 Cells,	729.00
60 A-6 Cells,	1080.00
Sundries,	10.00
	<u>1819.00</u>

INVOICES RECEIVED, 565.41

" " Cells 330.22
of 895.63

Form 54

Form 54, 1-6-10

THOMAS A. EDISON, President

W. S. MALLORY, Vice-President

H. F. MILLER, Secretary-Treasurer

EDISON CHEMICAL WORKS

TELEPHONE "1686 BLOOMFIELD"

SILVER LAKE, N. J., Jan. 25/10.

Mr. H. F. Miller,
 Edison Laboratory.

Dear Sir:-

The total amount of bills received here today is \$330.22.

Yours truly,

EDISON CHEMICAL WORKS.

Per *John R. Miller*

Dyer - Collections appear foot 2
Edison Storage Battery Co.

Shipments to 2-A4 and 200 A6 and Sundries	Feb 17 th	\$ 3672.00
Shipments to 317-A4 and 760 A6 and Sundries	Feb 1 st to 17 th	\$ 18238.00
average shipments daily	Feb 1 st to 17 th	63 1/2 cels
Orders rec'd	Feb 17 th A 4	2 cels
" " " " A 6		63 "
" " " " A 8		none
Orders rec'd	Feb 1 st to 17 th A 4	41 cels
" " " " " " A 6		1760 "
" " " " " " A 8		64 "
unfilled orders	Feb 17 th A 4	3295 cels
" " " " " " A 6		3345 "
" " " " " " A 8		64 "
average orders rec'd daily	Feb 1 st to 17 th	109 1/3 cels
Bank balance		\$ 763.77
Collections during February		\$ 5697.24
Cells assembled	Feb 17 th	225 A4
stock on hand ready for list	Feb 17 th A 4	591 cels
" " " " " " " " A 6		2367 "
Am't. Billed received	Feb 1 st to 17 th	\$ 31,225.66

[ATTACHMENT]

EDISON STORAGE BATTERY CO.

Report of Invoices Issued,

February 17, 1910

3813 Anderson Carriage Co., 200 A-6 Cells 5 Filling Outfits, 3645.00

3814 Lake Forest University, 2 A-4 Cells,

27.00

3,672.00

Edison Storage Battery Co.

We'll have to get bills more
active on selling adstg etc

2

Shipments	March 7 th	none
Shipments 22 nd - A 4	March 1 st to 7 th 250 - A 6	\$ 7266.91
average shipments daily	March 1 st to 7 th	67 1/2 cels
orders received	March 7 th	A 4 140 cels
"	"	A 6 none
"	"	A 8 "
orders received	March 1 st to 7 th	A 4 252 cels
"	"	A 6 1 "
"	"	A 8 none
unfilled orders		A 4 2941 cels
"		A 6 2818 "
"		A 8 204 "
	Total	5763 "
average orders recd daily	March 1 st to 7 th	36 1/2 cels
Bank balance		\$ 298.44
Collections during	March	\$ 6793.13
Bills assembled	March 7 th	250 A 4
Stock on hand	ready for dist. March 7 th	A 4 1802 cels
"	"	A 6 2939 "
	Total	4741 "
amt. Billed	March 1 st to 7 th	\$ 11952.66

[ATTACHMENT]

EDISON STORAGE BATTERY CO.

REPORT OF SALES AND CELLS ON HAND	DATE	March 7, 1910
	A4	A6
Cells on hand previous day	1552	2939
Cells assembled this day	250	
Cells shipped this day	1802	2939
	Total	
	Balance on hand and ready for test	1802 2939
SALES		

NONE.

INVOICES RECEIVED,

157.69

" " *entry*

406.95

Form 54

564.64

Form 12, 14-10

THOMAS A. EDISON, President

W. S. MALLORY, Vice-President

H. F. MILLER, Secretary-Treasurer

EDISON CHEMICAL WORKS

TELEPHONE "1044 BLOOMFIELD"

SILVER LAKE, N. J., Mar. 7/10.

Mr. H. F. Miller,

Orange, N. J.

Dear Sir:-

The total amount of bills received here today is \$406.95.

Yours truly,

EDISON CHEMICAL WORKS.

For *John R. Jones*

[ATTACHMENT]

EDISON STORAGE BATTERY CO.

Report of Orders

Date Mar. 7/10

	A-8	A-4	A-6
Orders on hand previous day	204	<u>2801</u>	<u>2818</u>
Orders received this day		<u>140</u>	<u> </u>
" " " to apply on contract	<u> </u>	<u> </u>	<u> </u>
Total	204	<u>2941</u>	<u>2818</u>
Shipments this day	<u> </u>	<u> </u>	<u> </u>
Balance of orders on hand	204	<u>2941</u>	<u>2818</u>

A-4

A-6

A-8

Contract orders on hand

Edison Street

26 $\frac{1}{4}$ per hour

to 2.6 $\frac{1}{4}$

833-A 4 and 635-A 6 and Bundles

~~56 1/2 cells~~

A 4

A 6
A 8

A4

A 6
A 8

A4

A 6
4 8

39 7/9 sec

24 249.83

20,819.50

7.8-A 4

3650.66

2584	0
64	1

45823.62

[ATTACHMENT]

EDISON STORAGE BATTERY CO.

REPORT OF SALES AND CELLS ON HAND

DATE March 26, 1910

	A4	A6	A-8
Cells on hand previous day	3654	2586	25
Cells assembled this day			39
Cells shipped this day			64
Total	3654	2586	64
	4 Memo	2 Memo	
Balance on hand and ready for test	3650	2584	64

SALES

NONE

INVOICES RECEIVED,

1177.95

" " CMB

292.88

1470.83

Form 34

Form 34, 10-10

THOMAS A. EDISON, President

W. S. MALLORY, Vice-President

H. F. MILLER, Secretary-Treasurer

EDISON CHEMICAL WORKS

TELEPHONE "1886 BLOOMFIELD"

SILVER LAKE, N. J., March 26, 1910.

Mr. H. F. Miller,
Edison Laboratory,
Orange, N. J.

Dear Sir:-

The total amount of bills received here at this office today is \$292.88.

Yours very truly,

Edison Chemical Works.

John R. Lyon

FRG/HVG.

446.28 1910

Dupl orders equivalent to 7597 A4 cells
 on hand " " 1168
 ahead of order 4085

Edison Storage Battery Co. #128500. Tied up @ warehouse

Us	Shipments May 5 th 40-A 1/2 and Dunderberg	#	487.50
	Shipments May 1 st to 5 th 40-A 4 1/2 192-A 6 1/2 1130-A 8 1/2 and Dunderberg	#	7453.14
	average shipments daily May 1 st to 5 th		72% all
	Orders received May 5 th	A 4	133 Bells
	" " " "	A 6	none
	" " " "	A 8	none
	Total		133 Bells
	Orders rec'd May 1 st to 5 th	A 4	453 Bells
	" " " " " "	A 6	1065 "
	" " " " " "	A 8	60 "
1	Total		1578 "
	unfilled Orders	A 4	2472 Bells
	" " " "	A 6	3091 "
	" " " "	A 8	244 "
	Total		5807 "
	average orders rec'd daily May 1 st to 5 th		315 % Bells
	Bank balance	#	464.75
	Collections during May	#	14038.30
	Bells assembled May 5 th		270-A 4
	Stock on hand ready for test May 5 th	A 4	2251 Bells
	" " " " " "	A 6	5119 "
	" " " " " "	A 8	881 "
	Total		8245 "
	am't - Bells rec'd May 1 st to 5 th	#	3520.14

[ATTACHMENT]

EDISON STORAGE BATTERY CO.

REPORT OF SALES AND CELLS ON HAND

DATE May 5, 1910

	A4	A6	A8
Cells on hand previous day	2292	4933	861
Cells assembled this day		180	
Cells shipped this day	2292	5113	861
Total	41		
(1 Memo)	2291	5113	861

SALES

40 A-4 Cells,
Sundries,

486.00
1.50
487.50

Invoices Received,

708.36

Form 34

Form 34, 10-10

THOMAS A. EDISON, President

W. S. MALLORY, Vice-President

H. F. MILLER, Secretary-Treasurer

EDISON CHEMICAL WORKS

TELEPHONE "1885 BLOOMFIELD"

SILVER LAKE, N. J., MAY 5 - 1910

Mr. H. F. Miller,

Orange, N. J.,

Dear Sir:-

The total amount of the bills received at this office to-day is, \$17.25

Yours very truly,

Edison Chemical Works.

[ATTACHMENT]

EDISON STORAGE BATTERY CO.

Report of Orders

Date May 5/10

	A-4	A-6	A-8
Orders on hand previous day	<u>2379</u>	<u>3091</u>	<u>244</u>
Orders received this day	<u>133</u>	<u> </u>	<u> </u>
" " " to apply on contract	<u> </u>	<u> </u>	<u> </u>
Total	<u>2512</u>	<u>3091</u>	<u>244</u>
Shipments this day	<u>40</u>	<u> </u>	<u> </u>
Balance of orders on hand	<u>2472</u>	<u>3091</u>	<u>244</u>

A-4

A-6

A-8

Contract orders on hand

May 13th, 1912.

Messrs. Edison & Dyer:-

Please note that we have this morning received the following orders:

Baker Motor Vehicle Co., Cleveland, O.,	60 A6	\$1200.00
	50 A4	675.00
Florida East Coast Railway Co., N.Y.C. <i>W</i>	28 ASH	650.00
Pratt Institute, Brooklyn, N. Y.,	4 A4	54.00
Anderson Elec. Car Co., Detroit, Mich.,	60 A12	2340.00
Trinity & Brazos Valley Ry. Co., Houston, Tex.,	8 A8	208.00
Robertson-Cataract Co., Buffalo, N. Y.,	2 B4	16.00
		<u>\$5143.00</u>

REL/FED

W
Edison

Mudd

This price don't seem right

35
25
175
175
175
548
\$26 each
25
130
52
\$ 650

ESBC
copy

file

October 30, 1912.

Mr. Edison:

I am returning herewith Salesmen's Expense Report for your files. I am keeping the one on which you remarked, "Bachman, Do you get these reports. Please keep eye on them."

I beg to say that I get all of these reports, as I have had them made up for my convenience and also for your files. I am glad you made this memorandum on the one you returned, as it will come in handy. I am keeping after these reports constantly, and no doubt you notice that they have come down considerably since I have taken an active part in this. There are some of them still two high.

I have just issued orders to Mr. Bee to lay off G. P. Wakeman at Chicago December 1st. He will be replaced by a cheaper man. Wakeman is the man I laid off at the Battery Company shipping department and later at the Lansden Co. He was rehired again by the Storage Battery Company Sales Dept. and placed in Chicago where he has also fallen down on the job. His inspection reports are misleading, and I decided he was not capable for the position.

Holland is arranging to send an \$18.00 per week man. We are now paying Wakeman \$25.00 per week.

RABEEB

Bachman

[ENCLOSURE]

SALESMEN'S & INSPECTORS' REPORT

4 Weeks ending Sept. 28, 1912

Name	R R & Trolley	Bus & Passage	Hotel	Meals	Enter tainment	Sundries	Total Expense	Salary	Salary & Expenses	Gross Sales A-4 equiv	Proportion Amt. Salary & Exp. to Sales
C. E. Foster								100.00	100.00		
C. B. Freyer	51.75	8.75	10.90	20.25	58.09		149.74	280.09	429.74	270.	3600.00 .119
John Kelly	61.95	2.00	24.45	35.55	133.10	.95	258.00**	200.00	458.00	180.	2400.00 .19
H. S. Potter Co	4.90	.50		1.05		3.86	10.31	160.00	170.31		
H. G. Thompson	76.80	24.45	62.50	99.50	348.50	29.00	640.75*	384.60	1025.35		
Geo. W. Daves	71.48	.10	17.50	42.40	46.50	4.50	182.48\$	100.00	282.48	2287.25	30232.50 .043
<u>SALES ENGINEERS</u>											
F. V. McGuinness	116.95	1.50	10.50	57.75	28.70	1.55	216.95**	100.00	316.95		
H. M. Wilson								100.00	100.00		
<u>INSPECTORS</u>											
F. J. Dinnany	8.50		44.40	22.70		2.70	108.80	80.00	188.80		
O. R. Hildebrandt	96.42		17.50	37.45		13.00	178.62	100.00	278.62		
L. W. Kellogg	35.95		12.50	19.45		.60	68.50	50.00	118.50		
H. O. Kimes	22.54		8.75	12.50		2.20	122.34	60.00	182.34		
L. F. Meissner	7.86			15.05		1.00	31.36	72.00	103.36		
G. F. Wakeman	8.30	2.00	4.00	6.45		2.77	126.63	100.00	226.63		
P. B. Marr	45.37		58.90	14.55		4.87	123.69	60.00	183.69		
John Paletier	6.11			18.40		2.65	35.91	60.00	95.91		
C. P. Schmand	8.22			14.00		1.56	32.34	60.00	92.34		

* Trip to California

** At Boston and Philadelphia

\$ At Boston

***Traveling west on R.R. Business

Robert C. Bachman

Meadcraft -

I get these now as then, do they only
read them when big - Why not
send them so I can see orders say
for work

February 28th, 1918.

ROY-2-403

Mr. Edison and File:-

Σ

Please note that we have this morning received the
following orders:

Miller Selden Elec. Co., Detroit, Mich.,
Western Elec. Co., Chicago, Ill.,
Mine Safety Appl. Co., Pittsburgh, Pa.,

Riverside Coal Mining Co., So. Fork, Pa.,
Ironton Engine Co., Ironton, O.,

Central Elec. Co., Chicago, Ill.,

6 MEO	16.80
25 B2	115.50
200 M.L.	1320.00
25 MB	45.00
32 G11	2255.54
35 G11	2252.80
144 G11	3555.40
238 G11	7872.80
24 BGM	232.32

TOTAL - - - - - \$ 17,898.26

H. G. THOMPSON.

April 28th. 1918.
ROY-8-289

Mr. Edison and file:-

Please note that we have this morning received the following orders:-

Mich. Railway Co., Jackson, Mich.,	7 ABH*	165.00
Stromberg Elec. Co., Chicago, Ill.,	1 BSH*	5.81
Commonwealth Edison Co., "	5 AS*	141.57
Mercury Mfg. Co., "	4200 A6	64680.00
Charity Organisation Society, New York City	60 A10	1437.48
Automatic Tramp. Co., Buffalo, N.Y.,	840 A6	12306.00
	480 A6	7892.00
	300 A4	3118.50
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.,	66 ASH	1267.00
Goodman Mfg. Co., Chicago, Ill.,	315 G18	12366.95
Virginia Mch. & Well Co., Richmond, Va.,	72 B4H	475.20
	48 BSH	435.60
	94 B4H	620.40
Walker Vehicle Co., Chicago, Ill.,	360 A6	5544.00
	360 AS	7207.20
	60 A10	1524.60
	60 A12	1801.80
Modern Farm Elec. Lt. Co., Sioux Falls, S.D.,	72 B4H	5575.68
Mine Safety Appl. Co., Pittsburgh, Pa.,	6 M.L.	47.19
Rieger & Grets Brewing Co., Phila., Pa.,	60 AS	858.00
Export Div., New York City,	30 B6	339.41
E. S. E. S. Co., San Francisco, Cal.,	200 A4	1797.40
	100 B6	626.87

TOTAL- - - - - \$150,405.16

H. G. THOMPSON.

10-1-20

TO: Edison Storage Battery Co.
 FROM: Arthur Kudd, Secretary
 RE: J. Kelly, Vice Pres. & Gen. Sales Mgr.
 SUBJECT: Daily report - orders received

FINANCIAL MEMORANDUM NO. 540

DATE September 10th, 1920
 EFFECTIVE

Mr. Thomas A. Edison requests that you supplement your daily report of orders received by two additional columns - one headed "Profit" and the other headed "Loss".

In these columns please show the difference between the "net" and the cost to make and sell.

For the purpose of making these computations, I give you herewith a schedule of the total cost to make and sell each type cell.

The cost to make and sell any type cell multiplied by the "number of cells" will give the total cost of the order. The difference between the total cost to make and sell and the net will give the profit or loss as the case may be.

Will you kindly have the reports for the 8th and 9th (attached) rewritten showing Profit or Loss on each order as outlined above?

Type	A-4 Equiv.	Cost to make & Sell
A4	1	15.76
A4H	1	16.01
A5	1 1/4	19.15
A6	1 1/2	21.98
A6H	1 1/2	22.60
A8	2	29.08
A8H	2	29.36
AL01	2 1/2	35.47
AL0H	2 1/2	36.01
AL2	3	41.83
AL2H	3	43.19
B1H	1/8	4.59
B2	1/4	5.04
B2H	1/4	5.81
B4	1/2	8.89
B4H	1/2	9.19
B6	3/4	12.15
B6H	3/4	12.50
O4	2/3	13.68
O6	1	19.19
O7	1 1/6	22.01
O9	1 1/2	25.97
Q11	1 5/6	30.55
Q14	2 1/3	42.32
Q16	3	52.00

COPIES TO: Mr. Edison
 Mr. Kudd
 Mr. Kelly
 Mr. ...
 Mr. ...

CC Messrs. P. H. Began, W. H. McDowcroft

11-11-11

<u>Type</u>	<u>A-1 Equip.</u>	<u>Cost to make & Sell</u>
200	3/100	2.00
High Lamp		0.85
L20	1/12	3/28
L30	1/8	4.62
L40	1/6	5.60
72	1/60	2.10

Thurs
/

10-20-22

10-20-22

10-20-22

10-20-22

10-20-22

Thomas A. Edison Industries

Vice President and Financial Executive

J.W. Robinson, Sec'y, T. A. E. Inc., E.H. Robert, Sec'y, E.P. Works
/ Arthur Mudd, Sec'y, E. S. H. Company R.N. Kellor, Sec'y, T.A.E. Pers.
J.C. La Rue, Sec'y, E.P.C. Co.

Business Conditions.

6957

September 17, 1920

Date of Issue

EFFECTIVE

I wish to urge upon you at this time the necessity of making plans for effecting possible savings, in order that our organization may be prepared to meet the more strenuous conditions, which all business will have to face during the next stage in the business cycle.

I would suggest that you scrutinize your records very carefully and actually get around in your various departments to see where curtailments can be made, even though same might be of a most minor nature.

Hambert

Mr. Edison's comments:

They never do anything. I never remember of a request of this kind which was ever carried out, but always received a reply that in their case it was absolutely impossible. To reduce expense, perhaps our head men are different.

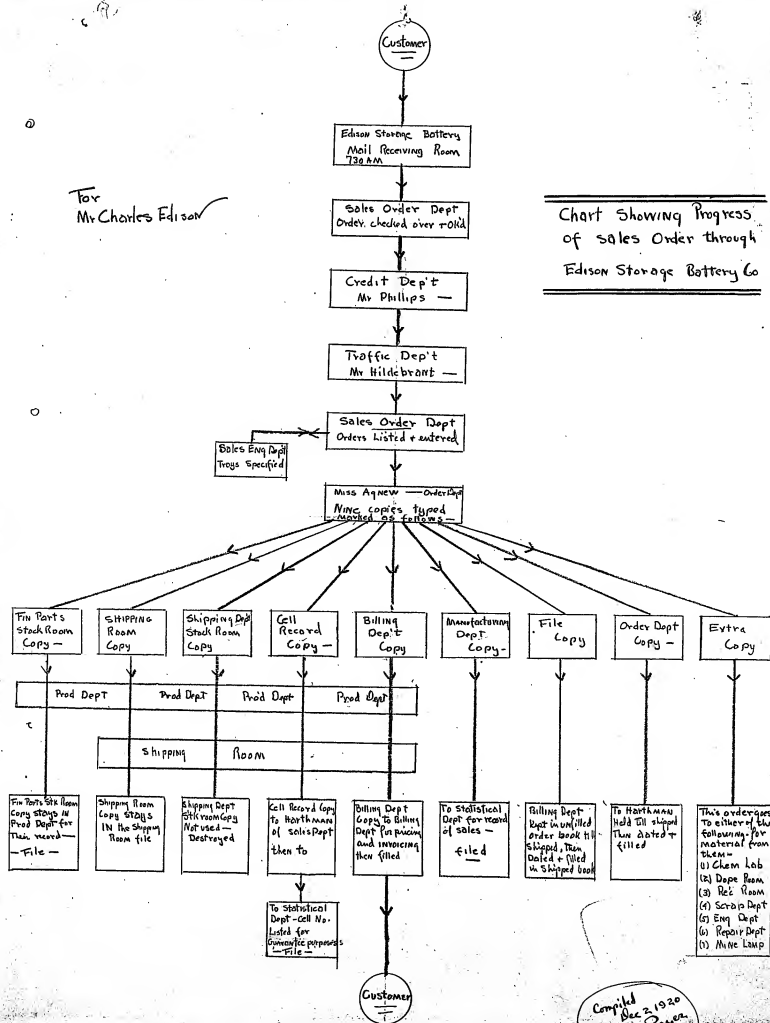
Edison

COPIES TO: MR. STEPHEN H. HANDELST—(2)

Messrs. Thomas A. Edison, Charles Edison
All Secretaries

For
Mr Charles Edison

Chart Showing Progress of sales Order through Edison Storage Battery Co



Compiled
Dec 2 1920
C.E. Payer

REPORT ON SALESMEN - WEEK ENDING FEB. 25, 1922

Alleganville Kept tab on these reports every month want total salary & expense account of these men added up & placed against sales to see at a glance the effect of salesmen.

NAME	SALES IN 4 QUARTERS	EXPENSE	SALARY
Lindsley, L.R.	---	\$26.26	\$50.00
Cassedy, J.A.	---	26.95	40.00
Holden, G.W.	121.	16.49	55.00
Donovan, P.F.	26.6	7.95	45.00
Riley, E.C.	75.	35.46	85.00
Kinney, C.H.	600.	28.00	70.00
Leible, C.F.	---	9.13	50.00
Fenner, F.E.	---	---	50.00
Jago, L.F.	510.	113.55	65.00
Koch, W.H.	---	58.56	40.00
Buech, L.W.	---	24.85	35.00
Giblin, T.E.	---	---	80.00
Moffat, R.M.	---	6.37	50.00
Jacobsen, E.R.	10.5	38.27	35.00
Tilt, E.B.	---	---	86.54
Palster, J.L.	27.	10.22	57.70
Cole, G.E.	150.	22.10	100.00
Glasier, G.J.	90.	35.03	75.00
Laffey, E.C.	75.	32.33	55.00
DeMott, W.C.	396.	22.13	70.00
Davison, H.L.	---	31.18	55.00
Mahaffey, J.K.	---	119.75	85.00
Hughes, D.B.	---	21.70	55.00
Hornell, C.A.	---	39.51	60.00
McClellan, G.H.	---	44.40	50.00
Wakeman, G.F.	---	79.43	75.00
Swanger, D.D.	---	---	45.00
Poyer, C.E.	---	---	50.00
Gibson, P.C.	---	47.05	75.00
Stringfellow, G.E.	180.	53.10	75.00
Nelson, F.R.	150.	49.01	45.00
O'Leary, E.L.	---	4.02	35.00
Megan, D.B.	---	---	65.00
Coleman, W.W.	---	---	90.00
Bauer, W.F.	---	56.46	95.00
Anderson, A.M.	---	15.06	50.00

*Balance of salary paid by T.A.E.

Storage Battery

#1 ✓ 2

REPORT ON SALESMEN - WEEK ENDING MARCH 11, 1922

Allegiance Don't forget
to put sales expenses for each
man Every 4 weeks - This case

NAME	SALES IN 44 EQUIV.	EXPENSE	SALARY
Lindsley, L.R.	3.75	----	\$50.00
Cassedy, J.A.	50.	25.16	40.00
Holden, G.W.	439.5	17.19	55.00
Donovan, P.F.	55.	12.35	45.00
Riley, E.C.	---	----	85.00
Rimney, C.H.	150.	----	70.00
Laible, C.F.	---	11.19	50.00
Fenner, F.E.	---	----	60.00
Jago, L.F.	599.	91.06	65.00
Koch, W.H.	---	9.46	40.00
Buech, L.W.	---	41.35	35.00
Giblin, T.E.	45.	29.53	80.00
Moffat, R.M.	---	49.56	50.00
Jacobson, E.H.	184.25	14.92	35.00
Tilt, E.B.	18.	7.40	86.54
Fulster, J.L.	48.3	11.95	57.70
Cole, G.E.	1440.	43.70	100.00
Glaser, G.J.	360.	61.41	75.00
Laffey, E.C.	130.	34.55	55.00
DeMott, W.C.	---	19.20	70.00
Davison, H.L.	---	46.53	65.00
Mahaffey, J.K.	47.85	----	85.00
Hughes, P.B.	---	30.85	55.00
Hornell, C.A.	200.	37.19	60.00
McClellan, G.H.	---	40.80	50.00
Wakeman, G.F.	---	151.42	75.00
Swager, J.D.	---	----	45.00
Poyer, C.E.	---	----	50.00
Gibson, F.C.	---	52.40	75.00
Stringfellow, G.E.	395.25	104.82	75.00
Nelson, P.R.	---	25.85	45.00
O'Leary, E.L.	---	55.88	35.00
Hagan, D.B.	---	125.45	65.00
Coleman, W.W.	---	110.72	90.00
Bauer, W.F.	---	65.98	95.00
Anderson, A.M.	---	----	50.00

* Balance of salary paid by T.A.E.

show who the good
salesmen are

you have 4 week
report now

Challenged - HQ to me except as I said #2 ①

REPORT ON SALESMAN - WEEK ENDING MARCH 25, 1932

NAME	SALES IN A4 EQUIV.	EXPENSE	SALARY
Lindsley, L.R.	----	\$43.88	\$50.00
Cassedy, J.A.	----	10.61	40.00
Holden, G.W.	216.	19.57	55.00
Donovan, F.F.	2.5	11.12	43.00
Riley, E.C.	192.	6.00	85.00
Kimney, C.H.	----	39.62	70.00
Laible, C.F.	----	5.89	50.00
Fenner, F.E.	----	-----	60.00
Jago, L.F.	12.	86.05	65.00
Koch, W.H.	----	63.37	40.00
Busch, L.W.	8.	50.70	35.00
Giblin, T.E.	----	29.42	80.00
Hoffet, R.M.	60.	5.25	50.00
Jacobsen, E.R.	75.	20.89	35.00
Tilt, E.B.	63.	26.21	86.54
Pulster, J.L.	2.5	90.43	57.70
Cole, G.E.	3295.	43.60	100.00
Glaser, G.J.	450.	24.50	75.00
Laffay, E.O.	187.5	30.55	55.00
DeMott, W.C.	----	27.70	70.00
Davison, H.L.	120.	10.30	65.00
Mahaffey, J.K.	----	65.90	85.00
Hughes, D.B.	----	16.99	53.00
Hornell, C.A.	----	48.05	80.00
McOlellan, G.H.	----	17.90	50.00
Wakeman, G.F.	95.	95.61	75.00
Swanger, D.D.	----	-----	45.00
Poyer, C.E.	----	-----	50.00
Gibson, F.O.	----	22.55	75.00
Stringfellow, G.E.	104.25	67.75	75.00
Nelson, P.R.	----	30.93	45.00
O'Leary, E.L.	----	5.62	35.00
Engan, D.B.	----	30.50	65.00
Coleman, W.W.	202.	110.53	90.00
Bauer, W.F.	----	22.91	95.00
Anderson, A.H.	----	54.22	50.00

* Balance of salary paid by T.A.E.

Total - also monthly

Note - Report did not pass thru Mr. Es. Note it was right then.

COPY:

June 10, 1922.

Mr. Altengarten

I am submitting list of Salesmen and Expense of Sales and Service Men for your report to Mr. Edison, per his request to me. I have eliminated the service men from the salesmen list.

These so called sales reports are not a true measure of the work done by salesmen, as our salesmen take no orders. They can only report such orders as they may happen to know have been placed with manufacturers. Order for which they are responsible and are later sent to manufacturers who forward to us, probably never get on the salesmen's report.

F. D. FAGAN.

MR. EDISON HAS WRITTEN THE FOLLOWING NOTE ON THE ABOVE, which was sent Mr. Fagan, June 26th, 1922, 10 AM.

"I see that your system can never inform you if a man is competent or incompetent. Every man you hire will be 100% efficient because you have no system to prove the contrary. Such a system and method is absurd. EDISON"

"P.S. You must get a better system."

[ATTACHMENT]

Sales & Service Men

MR. L. F. JAGO....Sells in Kansas City office. Does a great deal of service work outside of the city.

MR. E. R. JACOBSEN....Only sales and service man in Detroit.

MR. E. B. TILT....Only sales and service man in Canada.

MR. J. L. FULSTER....Makes trips into Texas. Spends considerable time on service as well as sales.

MR. D. B. HUGHES....Covers all service in Coal Mines at Scranton. Does some selling.

MR. C. A. HORNELL....Only service man in Charleston, West Virginia. Covers some sales.

MR. G. F. WARMAN....Makes long trips into Arizona, Colorado and Utah. Covers service as well as sales.

MR. C. E. POYER....Only sales and service man in Southern California.

MR. F. C. GIBSON....Only man in Seattle territory. Covers sales and service in Oregon, Washington and Montana, etc.

MR. P. R. NELSON....Service and salesman located in Baltimore.

MR. A. M. ANDERSON....Most of his time is spent in railroad service. Occasionally sales work.

MR. P. F. DOHOVAN....Covers sales and service in Boston territory.

MR. E. L. O'LEARY....Discharged.

[ATTACHMENT]

REPORT ON SALESMEN - WEEK ENDING MAY 20, 1922

Duplicate

#4

0

D. M. ...

NAME	SALES IN A& EQUITY.	EXPENSE	SALARY
Lindeley, L.R.	50.	\$80.68	\$60.00
Cassedy, J.A.	204.	26.07	45.00
Holden, G.W.	36.	25.94	55.00
Donovan, P.F.	---	10.80	43.00
Delott, W.C.	---	18.10	70.00
Piley, E.C.	---	---	85.00
Kinney, C.H.	180.	32.00	70.00
Laible, C.F.	10.	---	50.00
Fenner, F.B.	---	---	60.00
Jago, L.F.	319.	82.64	65.00
Koch, W.H.	24.	5.69	40.00
Basch, L.V.	---	44.39	35.00
Giblin, T.E.	126.	34.16	80.00
Roffat, R.E.	24.	9.14	50.00
Jacobsen, E.R.	133.45	45.20	40.00
Tilt, E.B.	2.5	9.06	86.54
Pulster, J.L.	11.36	82.51	57.70
Cole, G.E.	661.5	32.05	100.00
Glasser, G.J.	65.	28.69	75.00
Laffey, E.C.	31.6	33.60	60.00
Davison, H.L.	3.	51.02	65.00
Mahaffey, J.K.	163.	26.50	85.00
Hughes, D.B.	---	21.54	53.00
Hornell, G.A.	362.	56.06	60.00
McGillan, G.H.	---	34.10	50.00
Wakeman, G.F.	---	64.05	75.00
Swanger, D.D.	30.5	4.93	50.00
Foyer, G.E.	210.	11.86	76.00
Gibson, F.C.	132.5	43.65	75.00
Stringfellow, G.E.	10.	95.98	75.00
Nelson, F.R.	60.	108.26	50.00
O'Leary, E.L.	---	82.74	35.00
Ingram, D.B.	---	129.90	65.00
Coleman, W.W.	---	66.88	90.00
Bauer, W.F.	---	124.56	95.00
Anderson, A.H.	42.	48.80	50.00

EDISON STORAGE BATTERY CO.

Memorandum

Charles -

Why don't Blair go back
3 or 4 months -

What is wanted is
to cut out poor sales
not diminish the
number of

MR. ALFENGARTEN:

Herewith is a monthly report on individual sales distribution
for the month of May, complete with the exception of the Chicago
District. There has been some misunderstanding at Chicago as
to what was required and the corrected figures are not yet in.

I will forward them to you as soon as they are received.

FEB:EE

We must have
records for 3 or
4 months -
BLAIR

Mr. Edison -
When the
next report comes
in I will put on
regular form for comparison.
This is the new scheme,
per Charles Edison's
note third attached.
HAG

[ATTACHMENT]

MONTHLY REPORT ON SALESMEN - MAY 1928

<u>SALESMAN</u>	<u>A-4 EQUIV.</u>	<u>EXP. & SALARY</u>	<u>EXP. PER A-4</u>
L. R. Lindale	138	<u>ATLANTA</u> \$664.00	\$4.01
G. W. Holden	297	<u>BOSTON</u> 428.00	1.44
T. E. Giblin	814	<u>CLEVELAND</u> 670.00	.82
R. M. Moffat	461	445.00	.97
J. L. Pulster	273	<u>NEW ORLEANS</u> 588.00	2.15
G. E. Cole	943	<u>NEW YORK</u> 674.00	.71
G. J. Glaser	190	523.00	2.75
E. G. Laffey	1643	469.00	.30
H. L. Davison	278	<u>PHILADELPHIA</u> 417.00	1.50
J. K. Mahaffey	156	<u>PITTSBURGH</u> 549.00	2.52
G. H. McClellan	92	392.00	3.26
G. E. Stringfellow	236	<u>WASHINGTON</u> 744.00	3.15
D. B. Kugan	839	<u>RAILROAD</u> 839.00	1.00
W. F. Bauer	835	1125.00	1.34
W. W. Coleman	154	783.00	5.08
(Supplemental-) Chicago			
E. C. Riley	550	\$347.46	.63
C. H. Kinney	720	776.07	.61
C. F. Knibbe	384	279.86	.57
	-----0-----		

Orig. copy
attached to C. Edison file

[ATTACHMENT]

Mugan
(to Fundation)
expended \$1608 in
one month —

Is any district
managers in his list

Individual Sales distribution - 44 Equivalents - worked out by Mr. Blair -
under his new method - EXPENSE OR AMOUNT SHOWN IS COST TO SELL ONE 44 Equiv.

Name of Salesman	Month of MAY 1922	Month of JUNE 1922	Month of July 1922	Month of Aug. 1922	Month of Sept. 1922	Month of Oct. 1922
L. R. Lindseley Atlanta	\$ 4.01	\$ 1.63	\$.63	1.17	\$ 1.54	\$ 1.70
G. W. Holden Boston	1.44	1.04	.76	.47	.87	.77
E. O. Riley Chicago	.63	.61	1.78	.78	1.68	1.29
G. H. Kinney Chicago	.61	.23	.62	---	---	---
G. F. Leible Chicago	.67	.64	.61	.64	1.06	2.05
T. M. Giblin Cleveland	.62	.74	.65	.48	.40	.68
R. H. Moffat Cleveland	.97	.61	.65	.38	.37	.63
G. B. Cole New York	.71	.81	2.42	3.34	.37	.22
G. J. Glasser " "	2.73	1.09	1.48	1.36	.38	.17
E. C. Laffey " "	.30	6.69	.90	1.19	.19	.17
H. L. Davison Phila.	1.50	1.50	2.09	1.98	2.31	1.86
C. S. Sackett						
J. K. Mahaffey Pittsburgh	2.52	.93	1.20	1.36	4.06	.63
G. H. McOlellan "	3.26	1.01	.92	2.22	4.36	.93
Stringfellow Washington	3.16	1.07	2.07	.79	1.19	2.19
D. B. Mangan Railroad	1.00	.96	.82	.64	3.13	1.07
W. W. Coleman "	5.08	---	.68	2.80	2.89	.90
W. F. Buser "	1.84	.64	.66	.76	1.73	1.16
J. L. Pulster New Orleans	2.15	.63	14.27	.66	1.76	3.22

7

7/28
S

7/28
S

7/28
S

7/28
S

7/28
S

7/28
S

7/28

ng

Mr. Alton

What I want is Cost for each man
of new Sales leaving out residuals
or replacement ~~or sales~~ as we
would get them ^{Now} ~~away~~ ^{every} ~~+~~
don't come from Salesman
Efforts —

MR. CHAS. EDISON

SEP 12 '22

Attached hereto is the individual sales distribution
for the month of September, 1922.

F. R. BLAIR.

Not correct
see above

Mr. Edison -
Mr. Blair tells me
you were looking for
"direct sales & replacements"
and new equipment sales of
Ex'ts. salesmen. As I only
previously got this for sales
expense per A4, for salesman,
thought the additional dope was
for Mr. Chas. - When the next
one comes in will put on
regular sheet for
comparison monthly -
HAY

[ATTACHMENT]

MONTHLY REPORT ON SALESMEN.

SEPTEMBER 1922

SALESMAN	DIRECT SALES & REPLACEMENTS	NEW EQUIPMENT	TOTAL	EXP. & SALARY	EXP. PER A-4
L. R. Lindsley	196.	<u>ATLANTA</u> 54.	222.	397.00	1.54
G. W. Holden	279.	<u>BOSTON</u> 169.	468.	416.00	.87
E. C. Riley	182.	<u>CHICAGO</u> 180.	312.	523.00	1.66
C. F. Leibie	---	360.	360.	382.00	1.06
T. E. Gibling	1742.	<u>CLEVELAND</u> 48.	1790.	713.00	.40
R. H. Moffat	874.	445.	1319.	482.00	.37
J. L. Pulster	166.	<u>NEW ORLEANS</u> 60.	226.	396.00	1.75
G. E. Cole	1710.	<u>NEW YORK</u> 45.	1755.	661.00	.37
G. J. Glaser	277.	1080.	1457.	559.00	.36
E. C. Laffey	404.	1995.	2399.	461.00	.19
H. L. Davison	75.	<u>PHILADELPHIA</u> 150.	225.	520.00	2.31
J. K. Mahaffey	20.	<u>PITTSBURGH</u> 129.	159.	645.00	4.06
G. H. McGiellen	99.	---	99.	432.00	4.56
G. E. Stringfellow	571.	<u>WASHINGTON</u> 75.	646.	770.00	1.19
D. B. Mogan	167.	<u>RAILROAD</u> ---	167.	523.00	3.13
W. W. Coleman	241.	---	241.	698.00	2.89
W. F. Bauer	459.	---	459.	796.00	1.73

*Check submitted
on coln. new
sheet
Hess*

[ATTACHMENT]

12/13/22

Mr. Charles Edison -

Thought you would
like to see enclosed -
and after meeting, pls.
return.

Noted
H. H. Hengstenberg

December 13, 1922.

Mr. Blair:

Our telephone conversations on "Direct Sales and Replacements" and "New Equipment". I have shown Mr. Edison your September, 1922, statement on these items, but he says it is not quite what he wants.

What Mr. Edison wants is the cost for each salesman of new sales, leaving out reorders or replacements - as Mr. Edison says we would get these anyway and the latter would not come through salesman's efforts.

Will you kindly arrange, therefore, as advised over the 'phone, that I get this information every month for Mr. Edison, as well as "Expense per A-4, per district, per Salesman, for all of his business.

H. A. ALTENGARTEN.

JUN 23 1923

July 22/1923

Go over and ask Blair
to give me this back
to July 1923 -

I don't want to wait
6 months to find out
the poor salesmen
when I can get it
from previous 6 month

Be sure you get it
as I have made 4
records in last
3 months for what
I have now ^{from} Edison

But they should
give sales for each
man in A4
Equivalents so I could
have the figures if
keep this record
up & get it every
month ~~as~~ as they receive
Complete reports

also give total
sales & average
Costly each week in separate column

Edison

JUN 25 '73

McClung

Blair gets it from
somebody - finds
that somebody
a get what if
asked you to
get without
waiting for
Blair -

2

McClung

Are you getting
backlog as asked
of S Bat Salesman

2

Yes, but Blair was
away yesterday, and at
noon took it up with his
office - will see Blair soon
as he comes in - am
after it.

Wag

JAN 28 '23

Allenquaiten

See me this closed
be changed a little —

{

JAN 29 '23

Allenquaiten
When you get DEC

Start on new sheet
but pin this to it

Also find average cost
for each man for 6
months & add at

XX —

add his total expenses
& divide by the total
Cells sold

This statement is Edison
due get it — E

Jan. 29, 1923.

Mr. Edison:

Re attached - Sales Dept., ESB, say that the month of November is really the first month when they started to segregate all sales in their proper classification, and that the A4's shown in November represent all new business as well as new equipment.

Months of July to October, inclusive, cover new equipment sold through manufacturers, such as Ward Vehicle Co.

The new equipment or new business secured by the Railroad men was never kept separate until November report.

~~CONFIDENTIAL~~
H. A. ALTENGARTEN

[JANUARY 29, 1923]

E. S. B. - New Equipment Sales																								
Name	Position	Located	Weekly Salary	July, 1922			August, 1922			Sept, 1922			October, 1922			November, 1922			December, 1922			Six Months		
				A4 Equiv	Expense % Salary	Expense Per A4	A4 Equiv	Expense % Salary	Expense Per A4	A4 Equiv	Expense % Salary	Expense Per A4	A4 Equiv	Expense % Salary	Expense Per A4	A4 Equiv	Expense % Salary	Expense Per A4	A4 Equiv	Expense % Salary	Expense Per A4	A4 Equiv	Expense % Salary	Expense Per A4
L.R.Linsley	Salesman	Atlanta	950.00	126	\$ 423.00	\$ 3.36	198	\$ 428.00	\$2.16	54	\$ 387.00	\$ 7.17	63	\$ 551.00	\$ 8.74	23	\$ 283.00	\$12.30	469	\$ 484.00	.99	953	\$ 2,556.00	\$ 2.68
G.L.Holden	"	Boston	70.00	63	468.00	7.43	77	379.00	4.92	109	418.00	2.21	158	375.00	2.37	189	372.00	1.97	483	804.00	1.16	1109	2,516.00	2.27
E.C.Riley	"	Chicago	95.00	126	611.00	4.85	375	444.00	1.18	180	523.00	2.91	132	404.00	3.06	64	560.00	8.75	1290	611.00	.47	2167	3,153.00	1.45
G.H.Kinney	"	"	75.00	320	498.00	1.56	---	435.00	---	---	533.00	---	---	None	---	---	None	---	---	---	---	---	---	---
C.F.Laible	"	"	55.00	456	307.00	.67	---	246.00	---	360	382.00	1.06	180	390.00	2.16	660	367.00	.86	20	317.00	15.85	1676	2,009.00	1.20
T.E.Giblin	"	Cleveland	95.00	675	687.00	1.02	294	531.00	1.61	48	713.00	1.48	45	619.00	13.75	None	562.00	---	None	727.00	---	1062	3,839.00	3.61
R.M.Moffat	"	"	55.00	282	323.00	1.28	426	325.00	.76	445	482.00	1.08	459	332.00	.72	512	366.00	.71	1206	463.00	.38	3300	2,291.00	.69
J.L.Pulster	Sales/Service	New Orleans	65.00	---	501.00	---	300	495.00	1.65	60	396.00	6.60	36	358.00	9.94	212	420.00	1.98	42	506.00	12.06	650	2,676.00	4.11
G.E.Cole	Salesman	New York	100.00	96	662.00	6.90	122	508.00	4.16	45	661.00	1.47	430	582.00	1.35	3364	612.00	.18	3208	732.00	.23	7865	\$ 3,757.00	.52
G.J.Glaser	"	"	75.00	204	540.00	2.65	270	415.00	1.54	1080	559.00	.52	1980	438.00	.22	2055	425.00	.21	240	596.00	2.48	5829	2,983.00	.51
E.V.Laffey	"	"	75.00	90	453.00	5.03	107	293.00	2.74	1995	461.00	.23	2091	378.00	.18	266	365.00	1.37	323	527.00	1.60	4678	2,477.00	.51
H.L.Davison	"	Philadelphia	65.00	36	479.00	13.31	36	417.00	11.58	150	520.00	3.47	None	403.00	---	100	377.00	3.77	196	478.00	2.44	518	2,674.00	5.16
J.K.Mahaffey	"	Pittsburgh	85.00	147	538.00	3.66	179	451.00	2.52	139	645.00	4.64	514	582.00	1.13	585	488.00	.83	378	526.00	1.66	1942	3,330.00	1.71
G.H.McGiellan	"	"	55.00	396	356.00	.97	---	295.00	---	---	432.00	---	14	363.00	25.93	930	352.00	.38	870	404.00	.46	2210	2,322.00	1.01
G.K.Stringfellow	"	Washington	75.00	182	673.00	3.70	386	649.00	1.68	75	770.00	10.27	90	546.00	6.08	3045	579.00	.19	2014	815.00	.41	5792	4,034.00	.70
D.B.Muggen	RAILROAD Sales	Orange	72.50	---	599.00	---	---	438.00	---	---	523.00	---	---	491.00	---	720	594.00	.83	420	524.00	1.25	---	---	---
W.W.Coleman	"	New York	90.00	---	562.00	---	---	498.00	---	---	698.00	---	---	498.00	---	318	736.00	2.31	652	571.00	.89	---	---	---
W.F.Bauer	"	Chicago	95.00	---	608.00	---	---	551.00	---	---	796.00	---	---	698.00	---	1446	756.00	.52	470	833.00	1.77	---	---	---
Totals			1047.50	3169	\$9576.00		2770	\$7876.00		4820	\$9876.00		6192	\$8006.00		11489	\$8224.00		12571	\$9778.00		7923		
										205			1458			56.7								

Feb. 6, 1923.

Mr. Edison:

E.C.B. Salesman - On the enclosed sheet are shown sales for December, new business, of those that have been sent in up to date. Just as soon as the others arrive from Chicago, Cleveland, etc. will put them in.

You will also find totals for six months - total expenses added up and divided by number of cells sold.

Sales Dept. say November and December are first months when all sales have been segregated into proper classification - so when December reports are complete will start new sheet, adding cumulative as months go on - then we can see at a glance the producers.

H.A.A.

96 a x
Main 70 x
1/11 x
Hag

Allenington

Note where I averaged
the Sales total per
month & divided
them into the Cost
giving average cost
per cell sold

Please keep this
up 2

May 7, 1923.

Mr. F. R. Blair:

Mr. Edison has requested me to prepare a statement for him showing sales of New Business or new accounts - E. S. B. - produced by your Salesmen from November to March, inclusive. Mr. Edison wanted to know the sales-salary expense per A4 for each salesman for the period mentioned. The subjoined figures have been shown to him, and he has asked me to send it to you with the following comment: "Blair"- A little analysis of efficiency of men" Mr. Edison further stated that an account like the American Railway Express, or any similar account that has already been established where the firm in question just reorders, should not be credited to the Salesman - Mr. Edison feels the new customers show the efficiency of the salesmen.

Cost Per A4, per salesman, November, 1922 to March, 1923:

Lindsley.....	\$ 1.86
Holden.....	1.84
Laible.....	.50
Giblin.....	2.00
Koffat.....	.54
Pulster.....	1.85
Cole.....	.18
Glaser.....	.99
Larrey.....	.91
Davison.....	2.28
McShaffey.....	.87
McClellan.....	.87
Stringfellow.....	.42
Mugan.....	.62
Bauer.....	1.84

H. A. ALFENGARTEN.

Haag

EDISON STORAGE BATTERY COMPANY

Charles Remondino Hatch
loaned me \$50,000 when
9 years have elapsed. This money
he got out of his sale of Klappan
mine - We owed him for some
a year - 7/2

Mr. Charles Edison
 Referring to the notes of Edison Storage Battery Company.
 The Jackson Coal Company. Still unsettled as this concern
 is in bankruptcy, and the Court has not as yet wound
 up their business.

Logan Elkhorn Coal Corporation. We have received a further
 remittance of \$500.00 on this account, leaving a bal-
 ance of \$500.00, which we hope to receive shortly.

Powley and Moody, Limited. \$3,000; this amount has been
 suspended, and should we recover anything against the
 judgment we have against them, it will be credited to
 the account at that time.

Rich Block Coal Company. This Company has been in bank-
 ruptcy. We have received the final dividend, and the
 balance has been suspended.

Race Creek Coal Company. The account is still in the
 hands of an attorney from whom we have had no recent
 advice. We shall follow this up.

Soper Mitchell Coal Company. These goods have been re-
 turned for credit. The Sales Department will issue
 credit, and the note will be cancelled.

George D. Whitcomb Company. This account has been further
 reduced to \$5,000, and we are receiving payments at
 the rate of \$800.00 a month on demand notes held.

Kindly accept my assurance that all of these matters are
 having our very close attention.

E. H. Phillips

Credit Manager.

EXP: CM

Return -
father -
Sorry you renewed Hatch's note.
I'm campaigning to collect a lot of
these odds & ends of Hatch was one of my
big victims - Give me a check at the
fourth time - 5

**Edison Storage Battery Company Records
Miller Reese Hutchison, Inc. (1911, 1916-1918)**

This folder contains documents relating to Miller Reese Hutchison, Inc., a corporation organized by Hutchison in 1916 to broker sales of Edison batteries to the United States government and the governments of other nations. Hutchison, who served as chief engineer at Edison's West Orange laboratory from August 1912 until July 1918, signed an agreement with ESBCo in January 1917 that licensed him to sell batteries for submarines, search lights, radio sets, and other purposes that did not include the propulsion of vehicles with wheels. Most of the items in this folder consist of memoranda by ESBCo executives regarding strained relations between their own sales division and Hutchison. There are also statements of the business done by Hutchison's company, minutes of ESBCo Executive Committee meetings, and descriptions of meetings with U.S. government officials. At the beginning of the folder is a proposed resolution from 1911 authorizing Hutchison to approve all bids and contracts involving ESBCo and the U.S. government. The authors include Edison, Charles Edison, Henry Lanahan, Stephen B. Mambert, and H. G. Thompson.

Approximately 50 percent of the documents have been selected. The items not selected pertain primarily to routine operations or duplicate information in selected material.

Related material can be found in the Miller Reese Hutchison Diary (Special Collections Series).

ENDORSEMENT.

U. S. NAVY PAY OFFICE.

NEW YORK
Dec. 22, 1911.

SUBJECT:

Edison Storage Battery Co.
Orange, N.J.

Please fill out the attached blank, showing individuals authorized to sign contracts and bonds on behalf of the company. The blank should be prepared in exact accordance with the instructions shown thereon, and returned to this office with executed N.P.C. contract No. 285, also enclosed.
Navy Pay Office
157

[ATTACHMENT]

Hutch
Will this
Harry fix this answer
up & let me see it

Σ

[ATTACHMENT]

Mr Edison

I find that the Directors of the Edison Storage Battery Co. have authorized the officers of the Company to sign and ^{and store certificates} counter sign checks, ~~and notes~~ only. Therefor I propose the following resolution be passed at a special meeting of the Board of Directors to be held at once

"Resolved that the President, Vice President, or Treasurer be and is hereby ^{authorized to and} authorized to sign all ^{contracts made with} the United States Government, and to execute all guarantees and bonds required in connection therewith and that Miller Rice Hutchison, ^{Superintendent} ~~Superintendent~~ be and is hereby authorized to ^{execute} ~~counter sign~~ all bids submitted to and contracts made with the United States Government."

The Government requires a certified copy of the

authority to place on file also a copy of the election of officers authorizes to sign.
H. J. M.

#4615

REFERRING TO FINANCIAL EXECUTIVE'S MEMORANDUM NO. 4615

DIVISION IN QUESTION— M.R. Hutchison Sales or Selling Division of E.S.B. Co. 12-13-16

SUBJECT— Proposed new Company, M.R. Hutchison, Inc.

RESULT WANTED BY— As soon as possible.

PLEASE COOPERATE WITH— Legal Service Department.

TO—

Edison

CONFERENCE OF EXECUTIVE COMMITTEE
OF EDISON STORAGE BATTERY COMPANY.

Mr. H.S. Thompson stated that Mr. M.R. Hutchison had discussed with him the matter of incorporating a company to handle on a strictly commission basis, business which he and Mr. Hutchison were now handling, to be known as M.R. Hutchison, Inc., with an office either at his residence in Newark or in New York, and that Mr. Hutchison had requested an increased discount from 20% to 30%.

Mr. Thompson further stated that Mr. Hutchison had written a memorandum to Mr. Thomas A. Edison, the tenor of which was that Mr. Thompson was agreeable to the formation of the Company and to the increased discount, and that it rested entirely with Mr. Edison so far as he then knew, to sanction this plan.

Mr. Hutchison desires this additional discount in order to defray his office rent, general expenses, etc.

Mr. Hutchison reported to Mr. Thompson that Mr. Edison wanted a more formal agreement drawn up as a mere memorandum would not do.

Mr. S.B. Harbert read a report of May Flat, 1915 to Mr. Thomas A. Edison, and it was agreed that the Legal Service Department secure a copy of this report and draw up a formal agreement.

XXXXXXXXXXXX

[CA. JANUARY 1917]

1
Charles Edison -
Mr E. When you will

I hope to specialize ² on
Wireless + Government work, and
to spend money and effort to make
a large market in the Wireless
but it is not a business proposition
to go ahead on such a campaign
until I have a definite contract
on which to complete the organization
of my Company.

I have been waiting for 2 months
for this simple contract. For some
reason it is held back. If all
contracts + agreements with large
concerns would take as long, the
world would stand still. My
patience is almost exhausted.

Hutch.

[ATTACHMENT]

Hutch - I thought
you were specializing
on Windows!
Im in
Please get 2

Im OK on this
soon as possible so
I can get copy
in, on time. I must
go away now but will
be back Tuesday
a.m.

/Hutch

2443

February 8, 1917

Mr. Charles Edison:-

I hand you herewith copy of a proposed agreement between Edison Storage Battery Company, M. R. Hutchison, Inc., Thomas A. Edison and M. R. Hutchison, revised in accordance with the Committee's action at its meeting held yesterday. I understand that you will submit this copy to Mr. Edison for his approval.

HL-JS

Henry Canham

This document merely says
you will give a certain discount
on certain type of battery -
you say nothing about protecting
him on these specifications against
competition from other agents
if he does a satisfactory
if business.



3

REFERRING TO FINANCIAL EXECUTIVE'S MEMORANDUM NO.

FUNCTION OR QUESTION— M. R. Hutchison, Sales of Selling Diva. of
 SUBJECT— E. S. S. Co.
 Proposed new Company - M. R. Hutchison, Inc.
 EFFECTIVE— Continuously
 FOLLOW UP BY— Legal Service Department.
 and
 TO— Secretarial Serv. Dept. E.S.S. Co.

DATE 6/19/17

File

Mr. M. R. Hutchison:

Enclosed please find signed agreement. You will note that one paragraph which appeared in former drafts has been omitted. This paragraph states that the Battery Company will refer all orders and inquiries received by them for wireless operation on land or sea, excepting for use of Railways not owned by the United States Government and for emergency lighting aboard vessels having American registry, excepting private yachts and excepting such inquiries and orders as we shall receive from other parties in foreign countries with whom we now have exclusive contracts for the sale of such batteries or for batteries for use in territory covered by such contract.

The decision to omit this paragraph was arrived at by the Board of Directors, including Mr. Edison, after very careful consideration, and as the Board could not see where the omission of it will work any real hardship on your company, we trust that you will be agreeable to the new draft as changed. Among other things that led the Board to its decision was the fact that your organization as at present constituted did not seem capable of covering the situation adequately. If in the future you have built up your organization to a point where it is demonstrating its ability to handle the entire matter for the Battery Company, it may be possible to re-open the question.

As to the other changes in the new draft, they are only those that you yourself suggested.

Trusting that the enclosed agreement will be satisfactory, I remain,

-----00000-----

S. B. Mumbert
S. B. Mumbert
 Vice-President and
 Financial Executive

COPIES TO— MR. S. B. MUMBERT (2)—

COPIES OF THIS REPORT— One to Edison— RETURNING THE ORIGINAL, INCLUDING TWO COPIES TO THE FINANCIAL EXECUTIVE'S OFFICE

REFERENCE TO FINANCIAL EXECUTIVE'S MEMORANDUM NO. _____
 DATE: July 2, 1917
 FUNCTION IN QUESTION: M.R. Hutchison Sales of Selling Div.
 of E.S.B. Co.
 SUBJECT: Proposed new company - M.R. Hutchison, Inc.
 EXECUTIVE: Continuously
 FOLLOW UP BY: Legal Service Dept and Sec. Serv. Dept. of E.S.B. Co.

Mr. R. W. Kellow:-

Replying to your memoranda of June 22nd and 29th.

The only object in having Mr. Edison sign the M. R. Hutchison Inc. agreement personally is because the agreement relates to certain foreign sales rights owned by Mr. Edison. When the supplementary letter was first prepared, it related only to the United States and it was not intended that Mr. Edison should sign it personally. The letter was afterwards revised to permit the Hutchison Company to sell batteries to replace Edison batteries in certain trucks owned by the United States Government and used in the Philippine Islands. As so revised it might have been properly signed by Mr. Edison as an individual. I do not think, however, that it is a matter of sufficient importance to trouble Mr. Edison to sign the copies again, inasmuch as the main contract and the letter of amendment were executed at the same time and the main contract is marked approved by Mr. Edison.

I am returning herewith the papers received with your memorandum of June 29th.

Henry Lanahan

Chas. Edison

3653X

REPORT TO FINANCIAL EXECUTIVE'S MEMORANDUM

3653X

FUNCTION IN QUESTION—Engineering Advisor to Mr. Edison

DATE: Aug. 14, 1917

SUBJECT—Standards (Use of Laboratory Stationery)

EFFECTIVE—Immediately

FOLLOW UP BY—Assistant Financial Executive

BY—

Mr. Chas. Edison for

Mr. A. Gibbons,
Gen. Office Service Dept.for Mr. E. M. Johnson
Stationery Stock Room

I have taken up with Mr. W. R. Hutchison the question of the disposition of certain stationery which you have on hand in the Stationery Stock Room printed for use at the time Mr. Hutchison was the Chief Engineer. In reply to my inquiry Mr. Hutchison writes as follows:

"I see no reason for scrapping the 6000 letter-heads purchased by the Dictating Machine Division a few years ago and used by them for advertising purposes.

"I suggest that these letterheads be put through the printing press, the words 'Chief Engineer' blotted out and in place of that, 'Engineering Advisor to Mr. Edison' printed directly underneath, in smaller type.

"I could use this stationery in preference to the regular stationery that has been printed already, a small quantity of which I have on hand. A sample of this is also enclosed."

In view of Mr. Hutchison's suggestions in the foregoing, will you not be good enough to take the necessary steps to have this stationery put in form so that Mr. Hutchison can make use of some as he sees fit.

Thanking you for your co-operation,

-000-



R. E. Johnson,
Assistant Financial Executive.

COPIES OF— Mr. E. M. Johnson (4)— Messrs. Charles Edison and W. R. Hutchison.

COPIES OF THIS REPORT SHOULD BE SENT TO ALL PARTIES RECEIVING THE ORIGINAL INCLUDING TWO COPIES TO THE FINANCIAL EXECUTIVE'S OFFICE

EDISON STORAGE BATTERY COMPANY

Memorandum

October 18th, 1917.

HGT-2-5062

Mr. Charles Edison and file:-

Replying to memorandum from Mr. Hutchison to you, dated October 12th, in which he sets forth certain reasons why the list prices to him for Government work should not be increased.

Mr. Hutchison states that I lose sight of the fact that in Government sales to M. R. H. Inc. we have no costly service expense. We do not consider that our service expense is costly, but we have given considerable service to Mr. Hutchison in the past, although not so much recently.

The Merchants and Miners Transportation Co.'s batteries for industrial trucks - for which Mr. Hutchison received credit - receive our regular inspection work; also last Fall we sent an inspector from New Orleans to Point Isabel, Tex. to inspect an installation and have been called upon at numerous times to look over work in which Mr. Hutchison has been interested.

During the E-2 Submarine controversy of course we were all on the job and a good deal of time was spent by Mr. Harold Smith of the Selling Division, and others, on this work.

Also I would call your attention to the fact that Mr. Lyndon's services are charged to the Selling Division and in the E-2 controversy we paid for all of the engineering services, and, as I recall it, the lawyer's fees together with certain fees of Mr. Lyndon.

We have, until the time of the signing of the contract, practically paid all of Mr. Hutchison's entertainment expenses and I would respectfully call your attention to the submarine batteries sold, which I understand from Mr. Mudd were sold at a loss to this company, although Mr. Hutchison received his commission.

There has been but very little advertising recently which could be properly charged to the M. R. Hutchison account, but in the past a great deal of advertising was done especially for Mr. Hutchison in the way of submarine bulletins, special pamphlets, instruction books, etc. It is true that since the signing of contract there have been no expenses which this company have paid for, but this is the same as any other manufacturer who have agents who naturally have to pay their own expenses, as well as expenses of their own salesman.

In connection with the guarantee would state that while we have probably not been called upon but very frequently to make good on the guarantee, still I would call your attention to the fact that a number of thousand of cells of the B type were sold for gun-firing and sighting under a 10 year guarantee, and a double indemnity should the batteries fail, or, in other words, should the batteries fail within a 10 year period we must pay the U. S. Government twice the cost to them of the cells. We have not had to make good under this guarantee as yet, but you can readily realize what

this might mean should any of the batteries fail. Mr. Hutchison contends that through his influence we will not have to make good the guarantee, but I cannot quite get this point of view in that it is altogether possible that Mr. Hutchison's influential friends might die, or otherwise leave the service, and furthermore it does not seem to me entirely good business to attempt to influence a decision in our favor when the product was sold under a guarantee which your Father must stand back of. It would seem to me that at any time we may be called upon to give service on such batteries as M. R. Hutchison, Inc. sell---the same as those sold by any manufacturer or agent with whom we have dealings. A part of our guarantee specifically states that our batteries are guaranteed, provided that we may have access for inspection and test purposes at all reasonable times, and while it is true that we have given but very little service in this connection, I cannot help but feel that at any time we may be called upon to give a great deal of service.

In connection with the tests on the batteries sold to the Russian Government, the expense of Mr. Maurice Fox in connection with the installation of these batteries and tests, etc. was not a very small item.

Such advertising as the company do must benefit M. R. Hutchison, Inc., although none of this is charged to him; but if the advertising is of any value whatsoever he must receive his share of benefits.

Mr. Hutchison states that a battery in a truck is always a source of liability to the company because the service is hard and the guarantee operative. Now this can be anything but true in connection with Mr. Hutchison I am at a loss to understand. The batteries which are sold to the Government for use in this country are a liability to this company and the guarantees, such as we issued, are operative - the same as in any other service for which we sell batteries. Mr. Hutchison, in signing his contract, understood that he waived all rights for the sale of batteries for propulsion of any type of truck on wheels, but it can be very readily understood by you that should it be possible for the Government to buy at our present list prices and our manufacturers, through whom we dispose of a great deal of our product, be compelled to quote 10% higher and Mr. Hutchison unconsciously quote to the Government our present list prices - you can, without further argument, I think realize the result. Mr. Hutchison is asked to do business the same as with any other agent or distributor with whom we do business in connection with the sale of cells, parts, etc., and I cannot see for the life of me why the prices to him should not be the same as to anyone else with whom we do business. We cannot have two or three prices and maintain our reputation. Should we reduce prices to M. R. Hutchison, Inc., or maintain our present standard list prices, it would very soon become known to the manufacturers who are our friends, and I would be - I know - placed in a most embarrassing position. We would be accused of favoritism and unfairness, and I wish to state right here and now that I would not care to have to answer the criticisms that would be heaped upon us; nor do I care to be responsible for this outcome.

This entire situation with M. R. Hutchison, Inc., is one which is not to my liking, because I cannot help but feel that Mr. Hutchison feels that I am trying to injure him - which is contrary to fact; but as I am held responsible by you for the Selling Division's policy and methods - unless the policy and methods evolved by me, and which have the sanction of yourself and the balance of the officials of this company, are the same for all with whom

- 3 -

we do business, I most respectfully suggest that I be held blameless for any unfortunate situations in which this company find itself in the future. My object is to carry out the company's desires to the best of my ability and to treat all with equal fairness, and I do not consider that it is fair to increase the price-made absolutely necessary-- to one class of customer and not to the other.

I would also advise that we are furnishing for Mr. Hutchison's account special forms of assembly and also including certain items such as special plates bearing the instructions for the care and operation of the battery, etc., which we do not furnish to other customers. I would consider altogether that Mr. Hutchison is receiving certain benefits from us over and above those given to the balance of our purchasers.

H. P. Thompson

January 16, 1918.

SUBJECT: SALES SITUATION AT WASHINGTON.

Mr. Charles Edison advised that it is imperative that a satisfactory arrangement should be reached at Washington relative to sales of storage batteries to the United States Government and for the purpose of working out an agreeable proposition, Mr. Charles Edison and Mr. H. G. Thompson leave for Washington today to confer with Mr. M. R. Hutchison.

Mr. Edison stated that Mr. Hutchison has expressed opinion that there should only be one representative of our product at Washington; that more than one submitting prices tends to create discord and result in lost business.

Mr. H. G. Thompson stated that the office maintained in Washington by the Selling Division is perfectly capable of looking after its end of the business, and Mr. Thompson feels that this office may have secured much business which was lost through lack of cooperation. Mr. Thompson further stated that the Selling Division has not quoted prices or solicited business in any way from the Government except on industrial trucks and tractors.

Mr. Edison said it is very probable in the near future that the Government departments will decide to buy from the manufacturers and not through jobbers and suggested that it might be better to come right out now and advise the Government that we will sell direct and at the same time quote better prices, than to be forced to it eventually.

Mr. Edison stated it would be insisted that a closer cooperation must be maintained between Mr. Hutchison's office and Mr. Thompson's office in Washington; that every lead obtained by either of these offices must be communicated to the other in writing with copies of such communications sent to Mr. Edison and to Mr. R. A. Bachman, in order that confliction in sales work may be avoided.

This situation will be thoroughly gone into by Mr. Edison and Mr. Thompson while in Washington.

----- 000 -----

Edison Storage Battery Co.

CHARLES EDISON
DIRECTOR
OF THE WORK

THOMAS A. EDISON
Thomas A. Edison

ORANGE, N. J. U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
E. S. HANDEKE VICE-PRESIDENT
ROBERT A. BACHMAN MANAGER
H. S. THOMPSON MANAGER
H. V. HULLEN MANAGER
ARTHUR RUDD TREASURER
SECRETARY

March 2, 1918.

Dear Charles:-

At the request of Messrs. Bachman, Thompson and Hutchison, I journeyed to Washington on the night of February 28, in order to visit the proper Financial Department of the Government regarding their conversation with Mr. M. R. Hutchison, President of M. R. Hutchison, Incorporated and Manager of the Army and Navy Department of the Edison Storage Battery Company.

Messrs. Bachman and Hutchison told me that the Government had made representations to them to the effect that our work would be put on a material, plus labor, plus manufacturing expense, plus 15% basis. They suggested that I visit the Financial Department to ascertain what could be done to straighten out this matter.

Upon my arrival in Washington I made a careful investigation of all phases of the situation and came to the conclusion that it would be very poor policy for our organization as a whole, or for me individually, to rush in as though we were greatly worried about the Government's proposal, as it might give the impression our prices were very much out of line, or in other words, that we were now overcharging the Government. Also, Mr. Hutchison was unable to convince me that the Government had definitely decided to carry out these representations. Without doubt, this situation has arisen due to Mr. Hutchison's delay in quoting prices which the Government had requested. I pointed out to Messrs. Bachman, Thompson and Hutchison that we could not ask the Government for a firm order without admitting the reasonableness of the Government's position, that they are entitled to know the prices and quotations of the merchandise which they are purchasing.

Accordingly, I suggested that Mr. Hutchison alone should see the representatives of the Government and immediately furnish them with prices and quotations, which he had failed to do to date, and after furnishing same, ask them for a firm order on the basis of prices quoted. Mr. Hutchison thought it advisable that Mr. Bachman go with him, which he did. They had an interview lasting about forty-five minutes, according to Mr. Bachman and about five minutes, according to Mr. Hutchison.

Page 2,
March 2, 1918.

The outcome of the whole matter as given to me by Messrs. Bachman and Hutchinson, is that the Government is desirous of talking to Mr. Edison's Financial man, in order that we may get down to cases and quote them minimum prices.

Of course, what the Government desires, is to buy economically just the same as we do, irrespective of internal considerations in the other fellow's organization, so that in the interest of the Edison Storage Battery Company and in your own interest personally, I may be forced to agree to an arrangement with the Government which will have the effect of depriving M. R. Hutchinson, Incorporated, of the large payments they are now receiving for engineering and development work that they have done, and are continuing to do, in connection with the application of our batteries to the Government's special needs.

You will readily understand that I am in a peculiar position in this regard, as both the Edison Storage Battery Company and Mr. Edison, whose representative I am, have permitted Mr. Hutchinson to arrange a figure on Army and Navy business which would create the impression that the Army and Navy business was a sales development of his own, and that we will see to it that he is taken care of for the months and years of time he has spent in the sales development of this business.

Another phase of this situation is the fact that we make little or no profit on Army and Navy business resulting from the activities of M. R. Hutchinson, Incorporated.

Theoretically, of course, Mr. Hutchinson should be subject to the control of our General Sales Manager, Mr. Thompson, but as a matter of fact whenever Hutchinson wants some special concession he makes a practice of going to Thompson and not securing what he is after, he goes to Bachman, failing here, he goes to Mudd, then to Mr. Edison or you, and will finally try to involve me in the matter. Now that you are away this situation is demanding an amount of my time out of all proportion to what should be the case if it were possible to get Hutchinson to work along organization lines, which I suppose will never be the case.

Of course, you understand that although we are only just about coming out even on this Army and Navy business, I have not felt badly because it has helped increase the volume and has also assisted with the depreciation of our buildings and equipment, to say nothing of the Two Million Dollar experimental account, which I have been gradually working off at the rate of one seventeenth each year. The phase of the matter which does concern me more than any other is the probability of the Government taking possession of our buildings and equipment. If we are to be subject to close supervision, I intend to secure about One Million Dollars from them and give them the opportunity of watching some of their own money as well as ours.

Page 3,
March 2, 1918.

In closing I can only say I am preparing for what will inevitably be brought up in Washington, with the intention of not playing any unnecessary cards. In any event, I will take steps to see that the name of Edison Storage Battery Company and your own good family name are not allowed to suffer.

Faithfully yours,

Stephen L. Macknet

Mr. Charles Edison,
Ft. Myers, Florida.

Edison Storage Battery Co.

CHARLES EDISON
EDISON
OF THE NAME

THOMAS A. EDISON
Thomas A. Edison

ORANGE, N. J. U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON
PRESIDENT
STEWART B. HARRIS
VICE-PRESIDENT
AND
FINANCIAL EXECUTIVE
ROBERT A. HARRIS
VICE-PRESIDENT
AND
FINANCIAL EXECUTIVE
W. C. THOMPSON
VICE-PRESIDENT
AND
FINANCIAL EXECUTIVE
ARTHUR HARRIS
SECRETARY

March 30, 1918.

Dear Charles:-

At the Directors Meeting of the Edison Storage Battery Company, held Monday March 25th, we had the pleasure of Mr. Crane's presence.

One of the subjects of moment was the large discounts which we give M. R. Hutchinson Incorporated. Mr. Crane was strongly opposed to continuing this practice and stated that it was his opinion that M. R. Hutchinson Incorporated had been amply paid for the efforts they had made relative to introducing our batteries to the Government, and as we are now well established with the Government, and orders amounting to a million dollars or more coming in, we should arrange a new basis of discount with M. R. Hutchinson Incorporated. No action was taken in this matter as the problem is not one to be solved hurriedly.

Authorization was given Mr. Thompson to sign the lease for the New York garage. This lease extends over a period of ten years, at an annual rental of \$14,500.00. The F. M. B. Realty Company Incorporated, are to start erecting the building immediately. Our principal reason for leasing a garage in New York City is to promote the sales of Edison Batteries and at the same time to provide reasonable storage and re-charging facilities for owners of vehicles equipped with Edison batteries as we know that owners of Edison batteries are forced to pay a higher rate for storage and re-charging than owners of Lead batteries. Mr. Thompson has estimated that the revenue we will receive from storage and re-charging service, will at least take care of all expenses attached to the garage, such as rent, electric current, wages, water, insurance etc; thus the additional publicity our batteries get from this source costs us practically nothing.

Mr. Crane offered the resignation of Mr. Pilling, Director of the Edison Storage Battery Company, which was accepted. Mr. J. V. Miller was immediately elected to the office.

Mr. Charles Edison,
March 30, 1918.
Page 2.

You will be interested to know that the production of iron at the Chemical Works is improving. John assures me that he will produce enough iron by May 1st for 3000 A-4-Equivalents a day, and by June 1st will reach the 4000 mark.

In speaking of the present difficulty of finding a satisfactory iron for our batteries, Mr. Crane made several very good suggestions, one of which was the possibility of leasing a Puddle Mill to produce our iron, stating that we could produce iron to compare favorably with Norway Iron, at a cost of approximately \$75.00 per ton by manufacturing not less than 150 tons a month, which is the tonnage we will use on the increased schedule of manufacture. This looked so good to us that the entire board accepted Mr. Crane's suggestion, that he take the matter up with an iron manufacturer who is a personal friend, and advise us later on as to the advisability of making such a lease.

We are having more or less difficulty with the labor situation. Now that we are getting a fairly good supply of iron from the Chemical Works, we are unable to increase our production just at this time on account of the great amount of sickness among our employees. Mr. Bachman told me there were 87 on the Battery Company sick list yesterday.

Faithfully yours,



Mr. Charles Edison,
Ft. Myers, Florida.

CHARLES EDISON
CHAIRMAN

ORANGE, N.J. U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXPEDITION

THOMAS A. EUBANK
PRESIDENT
STEPHEN D. HANBERT
VICE-PRESIDENT AND
FINANCIAL EXECUTIVE
ROBERT A. BACHMAN
VICE-PRESIDENT AND
GENERAL MANAGER
H. G. THOMPSON
VICE-PRESIDENT AND
GENERAL SALES MANAGER
H. F. MILLER
TREASURER
ARTHUR MUDD

Dear Mr. Edison:

Mr. Huthbison first became associated with us in 1910. His work was largely of a development and engineering nature and special work for yourself. He was working without salary, and his compensation came from sales, principally of Storage Batteries, under agreements made from time to time orally or as pencilled memoranda between yourself and him personally. His compensation was based on commissions entirely.

During the time between his first association with the Company and November 1, 1912, he became Chief Engineer of the Laboratory, and added of his own motion the words, "Personal Representative of Thomas A. Edison."

There was a great deal of misunderstanding, brought about by the fact that Mr. Thompson, of the Storage Battery Company, and Mr. Stevens, of the Export Division, were constantly running into special arrangements that Mr. Hutchison had made. Mr. Hutchison acted largely on his own responsibility, and conferred only with yourself during this period.

In order to straighten out the tangle, and clearly establish in writing the activities, jurisdiction, commissions and general place in the organization of M.R.Hutchison, a meeting was called on May 31, 1916, at which were present Charles Edison, Walter Stevens, H.G.Thompson and S.B.Mambert. The minutes of the meeting are reported in Exhibit "A".

The arrangements set forth in this Exhibit were satisfactory to Mr. Hutchison, and from approximately May 31, 1916, to approximately January 1, 1917, he operated under to agreement as set forth therein. During this time it was pointed out to Mr. Hutchison that in order to ~~undertake~~ properly undertake the business which he had agreed to handle, it would be necessary for him to build an organization capable of properly representing our product in his chosen field. In order to facilitate the financing of this Company it was agreed that he would return Mr. Hutchison a letter setting forth the terms and conditions under which his sales rights were to be reserved.

Another reason for the organization of this Company was to take Mr. Hutchison out of the commission-man class, which arrangement had created no end of discontent amongst other members of our organization, and put him on a par with any other firm with which we do business. A review of this situation is contained in Exhibit

10 B. This Exhibit also shows that the business was kept record
11 from Miller Rice Hutchinson, Incorporated, has not been profitable
12 to the Bellows Falls Battery Company

Mr. Edison: April 29, 1918.

-3-

business we could have to give the Government the benefit of the best discounts given anywhere else. New bids were asked for, and although the Edison Storage Battery Company tried to maintain list, the truck manufacturers submitted bids ranging all the way from list to 20%. In this case other influences worked against us as well, and we lost the business. Mr. Hutchinson was very much disturbed over the fact that manufacturers had quoted less than list, stating that his business as a middleman was in jeopardy.

After this occurrence there was a meeting held in Mr. Mambert's office, at which the danger to Mr. Hutchinson's business was discussed, and it was decided that the Edison Storage Battery Company would endeavor to maintain list at all times, quoting only less than list when forced to do so, to get the business, and then only 20% as a maximum. At this meeting it was also pointed out by Charles Edison and others that in so protecting Mr. Hutchinson we were laying ourselves open to charges of being unpatriotic and trying to hold up the Government.

A situation similar to the Stone & Webster difficulty came, in trying to do business with the Ordnance Division for trucks for use in Fort Newark, they forcing us to quote 20% discount, and refusing to deal with any middlemen. See Exhibit "F."

For a short while prior to January 1, 1918 the Edison Storage Battery Company had a representative spend part of his time in Washington, to look after the interests of the Company in the fields not covered by the Hutchinson agreement, namely, such Storage Battery business as ran on wheels. It should be pointed out that at no time in the past or at present has the Edison Storage Battery Company ever solicited orders in other fields than the above.

About January 1st there was so much Government business in the field that it was decided to start a temporary Washington office, with Mr. Mahaffey, former Pittsburgh manager, in charge. During this time Mr. Hutchinson and Mr. Thompson both complained of lack of co-operation between the two organizations. Matters came to such a pass that on January 16th a meeting was held (Exhibit "G") and it was decided that Mr. Thompson and Mr. Charles Edison would go to Washington to endeavor to bring about better working conditions.

The meeting in Washington, attended by Mr. Hutchinson, Mr. Ross, Mr. Thompson and Mr. Charles Edison, developed the fact that there was a growing tendency on the part of the Government Departments to cut out the middlemen; that the Storage Battery Company's inability to maintain list prices due to opposition on the part of the Government would result in making it harder for Mr. Hutchinson to maintain list prices and so earn a discount. Mr. Hutchinson asked if he could not, in order to camouflage the arrangement, represent himself as Manager of the Army and Navy Department of the Edison Storage Battery Company. It was decided that this would be taken up at Grange, and discussed, which was done, and after careful consideration of all phases of the question involved, it was decided that Mr. Hutchinson might so represent himself.

Amongst the difficulties that led up to this meeting in Washington was the fact that Mr. Hutchinson would give orders to the Edison Storage Battery Company, in anticipation of receiving the actual orders from the Government. Many orders were filed with us, and subsequently cancelled, because the Government order failed to materialize. The apparent object of placing orders with us in anticipation was that he would get prompt deliveries, and therefore prompt payment of his commission. This system naturally worked a hardship on the Battery Company and Mr. Thompson remonstrated several times with

44

Mr. Hutchison about it, without effect, until it was finally decided that we would accept no order from Miller Rees Hutchison, Incorporated unless accompanied by a Government order.

There have been four 688889 Government orders placed by the Signal Corps for Edison Storage Batteries. Numbers 1, 2 and 3 were placed for the 688889 Central Postal Directory, which, when being fixed, he apparently not being able to arrive at a satisfactory basis with the Government as concerned himself. Sometime later, the 688889 Central Postal Directory was ordered to be fixed by the Edison Storage Battery Company as contractors. It has since developed that in these three orders, as well as the 4th (Exhibit "H") our histories have been authorized to be considered as contractors. It has been authorized rating, and that they had been originally been placed with Mr. Hutchison on the assumption that there were no middlemen's com-

Sometimes before placing the 4th order, which was for 25,000
 L-30's, totalling \$368,000, it appears that the Signal Corps in some
 way got the idea that Mr. Mahaffey was getting a very large
 commission. On this order they refused to place it, and
 with Mr. Hutchinson, and in order to straighten out the tangle, Major
 Smith invited Mr. Thompson to a conference at the Hotel Astor in
 New York. Mr. Thompson was called on by Mr. Mahaffey, who
 message, and appeared on the scene. Mr. Mahaffey in the meantime
 had been notified, and was also present. This meeting took place
 at the Hotel Astor, New York, and was attended by Mr. Mahaffey, who
 had to have Mr. Hutchinson present but Mr. Hutchison thought it ~~was~~
 would be highly inadvisable for him to be there because of his iden-
 tification with the Signal Corps. Mr. Mahaffey, however, but suggested
 that Mr. Ross attend, which he did. Mr. Mahaffey from the Army
 Company's Washington office was also on hand. On meeting Major
 Smith in the Astor he drew Mr. Thompson to one side, and told him
 that the Signal Corps had refused to place the order for the L-30's
 with Miller Reese Hutchinson, Incorporated, and turned his back on
 Mr. Ross in a rather rude manner, and walked away. The conference
 with Mr. Mahaffey and Mr. Thompson was held in the Hotel Astor.
 The preliminary discussion developed the fact that the Government,
 represented by Major Smith, insisted that the Edison Storage Battery
 Company, which was the Signal Corps' exclusive agent for the Signal
 Corps, and that the Government would not deal with a middleman.
 While it was not definitely stated by Major Smith (so far as Mr.
 Thompson recalls) that the Government would commandeer our plant,
 the inference was made that the Government was going to take over
 inference, Major Smith conveyed the idea that we might be compelled
 to take the business on a cost plus basis. Upon our assurance to Major
 Smith that we would not do this, and that we would not do so
 fairly with the Government, it was decided that Mr. Mahaffey and Mr.
 Thompson would hold themselves in readiness to go to Washington upon
 the following day, and that Mr. Thompson would be the representative
 later being named by Major Smith as civilian purchasing agent for the
 Signal Corps at Washington. (Major Smith is in need of the Approval
 of the Signal Corps for this.)
 The Finance Department of the Edison Storage Battery Company,

After the meeting Mr. Rose blamed Mr. Thompson for an apparent frame-up, but after Mr. Thompson explained, and Mr. Mahaffey had made a statement to the effect that neither he or Mr. Thompson had anything to do with it, Mr. Rose and Mr. Hutchinson decided there was some one else to blame, and promptly picked out Lieut. John Sloane. I have since ascertained that Lieut. Sloane's connection with the matter is as follows:

A gentleman named Cioni, of the Signal Corps, had gone to Major Smith, Lieut. Sloane's superior, with the statement that Mr.

Mr. Edison: April 29, 1916.

-5-

Hutchison was getting a large discount on this battery business, and should be eliminated. Major Smith called Lieut. Sloane in, and asked him whether, in view of his connection with the Edison family, it would embarrass him to arrange a conference between the Edison Storage Battery Company and Major Smith. Lieut. Sloane said it would not, and arranged the conference, but did not attend it, and has no first-hand knowledge of what actually transpired.

As arranged for in the Hotel Astor conference, Messrs. Mambert, Bachman and Thompson went to Washington to see Mr. Fletcher. Mr. Fletcher stated that he was aware of the relations existing between the Edison Storage Battery Company and Mr. Hutchison. Mr. Fletcher asked what was the best discount it was possible for the Edison Storage Battery Company to quote the Government. Mr. Thompson stated that we were not able to quote any better figure than was maximum discount of 20% on this type of cell. Mr. Mambert explained that we had a business relation with Mr. Hutchison and that it was important that Mr. Hutchison's services should be considered in connection with the price quoted. We left the morning conference with the understanding that Mr. Fletcher would make some further inquiries into the matter and call us for a second conference in the afternoon. Mr. Fletcher evidently saw the reasonableness of our desire to have Mr. Hutchison present at the time of final agreement on the price question and advised us that he would be agreeable to our bringing Mr. Hutchison with us to the afternoon conference.

Mr. Fletcher first had a long conference with Mr. Hutchison and Mr. Rose, at which we were not present, at the conclusion of which we joined Mr. Fletcher, Mr. Hutchison and Mr. Rose, and it was mutually agreed that it was satisfactory to Mr. Fletcher, Mr. Hutchison and ourselves, to have the order placed through Mr. Hutchison. Mr. Thompson inquired relative to the price and Mr. Fletcher replied that the price agreed upon was \$14.75, which was the equivalent of 20% discount from list, plus the battery box factor.

Mr. Fletcher requested Mr. Mambert to wait around after the conference for further discussion in regard to the financing of this order. Mr. Hutchison asked for an opportunity to talk to Mr. Mambert and they stepped into a reception room. Mr. Hutchison advised Mr. Mambert that in order to get this order through and get the matter cleaned up that he, Mr. Hutchison, had agreed to waive his compensation on this particular order, and that he would get Mr. Fletcher so that he would understand the value of the work which he, Mr. Hutchison, was doing, so that there would be no difficulties in the future; that his compensation on this order would be only \$.23 per battery, and that he would get this situation, which had slipped a little from his control due to the introduction of this new man Mr. Fletcher, into line very quickly. He, Mr. Hutchison, asked Mr. Mambert what compensation the Edison Storage Battery Company would be willing to give him on this particular order in view of the fact that he had waived his usual compensation. Mr. Mambert advised him that he was not in position to say anything on the subject and would not be until these Government orders had been completed and the Edison Storage Battery Company paid for them, after which time it would be time enough for Mr. Hutchison to bring up the question of compensation in connection with the Government orders considered as a whole. Mr. Mambert pointed out that the Edison Storage Battery Company wished to be fair all around.

Out in the hall Mr. Thompson again inquired what price the

Mr. Edison; April 29, 1918.

-5-

order had been taken at, and received the reply from Mr. Rose that there was nothing in it for them, as they had taken it at \$14.75 a battery including boxes, which left them a profit of only \$.23 ~~888~~ which profit was solely on the battery boxes, which represents the difference between what Miller Reese Hutchison, Incorporated, has to pay for these battery boxes and what the Edison Storage Battery Company pays him for them.

At the end of this conference it was still an open question as to how the order was to be placed.

This formal order was finally placed with the Edison Storage Battery Company, direct.

It should be pointed out that on March 6, 1918, Miller Reese Hutchison, Incorporated, placed an order with the Edison Storage Battery Company corresponding with this Government order, evidently in anticipation of receiving it from the Government. It should be further pointed out that at a further ~~8888888888~~ conversation with Mr. Hutchison in which Mr. Hutchison continually referred to the question of his compensation on this 4th order, Mr. Mambert pointed out to him that his large profits on the first three orders, amounting to approximately \$175,000, represented a handsome recompense for his services in connection with the total Signal Corps business to date.

At this time Mr. Hutchison advised Mr. Mambert that he had not yet quoted prices to the Government on the first three orders for the Signal Corps, although he had placed orders with us for the manufacture of these ~~88888~~ batteries. Mr. Mambert immediately urged upon Mr. Hutchison the necessity of submitting these quotations without further delay, lest the failure to quote price would embarrass us further in our general dealings with the ~~8888888888~~ Signal Corps and particularly prevent the securing of advance payments so essential, if we were to meet our material bills and payrolls in connection with this work already in progress in our factory. Incidentally, this delay in quoting prices, had embarrassed us to some extent. Then Mr. Hutchison brought up the question of how he could quote the Government in connection with orders 1, 2 and 3, as a representative of the Edison Storage Battery Company. Mr. Mambert suggested to him that he quote the Government on Edison Storage Battery Company letter heads, signing the quotation as, Miller Reese Hutchison, Manager, Army and Navy Department. This was immediately done.

On my return from the South I found a contract ready for signature, covering the 4th order. Feeling that Mr. Hutchison might claim large compensation for getting this order, I wired him, asking whether or not he understood and agreed to the arrangement. The telegram in this connection are shown in Exhibit "I." Receiving no answer to the first wire, I again telegraphed Mr. Hutchison, with a like result. I then called on him at his home in the Park, and after a long talk, in which he did most of the talking, I asked him what answer he was going to make to these telegrams. He stated that he could make no answer inasmuch as he had a claim for compensation, which was really his 20% discount, to protect.

It is reported that Mr. Hutchison has engaged counsel, and is acting under the advice of attorney in all matters, and is merely waiting for your return before acting.

The contract covering the 4th order is still unsigned, also awaiting your return.

----- ooo -----

IN GENERAL,

Mr. Edison: April, 29, 1918. -7-

Throughout the association of Mr. Hutchison with us, and his controversies with the Edison Storage Battery Company, we have been more than fair and liberal with him. His business methods are those of a promoter. He will catch at every chance of making a dollar for himself, ~~88888888~~ irrespective of how it affects the standard policies of the Company or its profits. He is entirely insincere in his oft-repeated show of affection for the Company and the Company's interests. A few instances may serve to show what I mean:

In the case of the four Signal Corp orders, in order apparently to make it easier for him to sell he did not hesitate to overrate the capacities of our batteries.

He has never hesitated to try to get special guarantees for the materials he has sold.

In order to fill orders that he can get, he has forced us to manufacture new types of cells, or to make special parts, trays, etc., for cells sold by him.

In order to protect his discounts he has asked us to help him camouflage his real relation with our Company, by making him Manager of the Army and Navy Department of the Edison Storage Battery Company, which was done against our better judgment, and only because the other unsatisfactory conditions made it seem expedient and the only way out of our difficulties.

He has in the past gotten sales rights in various fields, such as searchlights, wireless, submarine, etc., and has done little with them. In this connection it should be pointed out that what little submarine business he did get resulted in a large cash loss to the Edison Storage Battery Company.

He has not hesitated to represent himself as the direct representative of all Edison Interests, and even after being expressly told on several occasions to keep his hands off has tried to make sales and secure commissions. A good case in point is the Primary Battery deal with the Signal Corps, in which, after being expressly told not to meddle, he went to the Signal Corps and bid, falsely representing himself as our direct representative, and consequently embroiling us in a controversy with the Western Electric Company. (See Exhibit "J.")

He has tried persistently to ~~888888~~ get a statement of the capacity of our factory, under the guise of wanting to keep from filling up the plant with Government work at the expense of our commercial business, but subsequently has shown his insincere disposition, by forcing on us indirectly, priorities on orders which he had gotten. These priority orders tied us up head and foot for about two weeks causing our shipments to fall practically to nothing.

He has placed orders with us amounting to many thousands of dollars, before actually getting the orders from the Government, apparently relying on his influence with this Company to allow him to cancel should the deal fail to materialize, and has so cancelled on many occasions. This naturally ties us up to manufacture stuff that never moves.

He has involved us in numerous controversies, not only with the Government, but with our commercial ~~88888888~~ customers, and in the past has made it difficult for our Export Division to handle ~~8888888888~~ the foreign sales end efficiently.

Due to our desire to protect him against loss of commissions,

Mr. Edison; April 29, 1918.

-3-

on account of the Government's desire to cut out middlemen, he has gotten us in wrong with Washington in many ~~quarters~~ quarters, and laid us open to a charge of being unpatriotic profiteers. As one Government official expressed it, we come to them with our flag in one hand and a gun in the other. His presence in Washington, and his representations to Government officials, have put us in an anomalous position respecting his relations with our Company.

In order to protect himself apparently, he has delayed so long in quoting prices on Government orders that we have been subjected to a great deal of criticism.

He has often done advertising on his own account, without consulting the Battery Company, which has not fitted into the policies of the Company, and has been unfavorably received. (See Exhibit "A.")

He has not hesitated to use your good name to get for himself that which he ~~could not get~~ otherwise could not get.

These few instances are not all by any means, but merely represent the kind of difficulties we encounter in doing business with Mr. Hutchinson.

I have a recommendation to make, but I would rather have you form your own opinion before submitting it. Whatever is done, however, must be done immediately.

Mr. Thomas A. Edison,
Orange, N. J.

Exhibit "A" - Memo of Meeting

- " "B" - Charles letter to Mr. Edison, Oct. 27, 1917.
- " "C" - Bradstreet Report
- " "D" - Agreement as of June 1, 1917.
- " "E" - Thompsons letter re. Stone and Webster deal
- " "F" - " " re. Cantonment
- " "G" - Minutes of Meeting of January 16, 1918.
- " "H" - 3x5 sheets. Re-cap of four Government orders.
- " "I" - Charles telegrams to Hutchison
- " "J" - Correspondence relative to Western Electric Company.
- " "K" - Advertisements appearing in Professional Memoirs.

[ENCLOSURE]

Form 1203.

FINANCIAL EXECUTIVES MEMORANDUM NO. _____

DIVISION IN QUESTION Selling Division of E. S. B. Co.
Export Division of T. A. E. Inc.

DATE May 31, 1916.

SUBJECT Organization.

RESULT WANTED BY Continuously effective upon approval by Mr. Edison.

FOLLOW-UP- BY- The writers.

Mr. T. A. Edison:-

On this day a co-operative discussion was held in the Library, present Messrs. Charles Edison, Walter Stevens, R. G. Thompson and Muebert, for the purpose of establishing clearly in writing the activities, jurisdiction, commissions and general place in the Organization of Mr. M. R. Hutchison.

Mr. Stevens as Division Manager of the Export Division of T. A. E., Incorporated, and Mr. Thompson as Division Manager of the Selling Division of the Edison Storage Battery Company, both feel the need of an interpretation of your ideas relative to the above subject, and along this line we have endeavored to combine your previous lead pencil notations to Messrs. Thompson and Stevens as well as verbal instructions supplementing same, to the end that a satisfactory written policy may be established.

The first fundamental principle which it seemed necessary to establish was the fact that Mr. Hutchison should in future be entitled to a commission only on such sales as were the result and outcome of Mr. Hutchison's personal intensive selling efforts.

The second fundamental principle that it seems advisable to establish is that both the Export Division of T. A. E., Incorporated, and the Selling Division of the Edison Storage Battery Company, have been in the past and will continue in the future, to refer all prospects of either this Government or foreign Governments for submarines to Mr. Hutchison—for Mr. Hutchison is the only Sales Representative of the Selling Division of the Edison Storage Battery Company and the Export Division of T. A. E., Incorporated, who has been intensively engaged in promoting and effecting sales of this type; namely, of cells used as motive power for submarines.

The third point in question is that in view of the fact that this large volume of business; namely, the supplying of batteries to be used as motive power for submarine purposes, has been entrusted by the Selling Division of the Edison Storage Battery Company and the Export Division of T. A. E., Incorporated, to Mr. Hutchison, that Mr. Hutchison in return is responsible; in fact, is solely responsible to Mr. Edison, for the proper volume of business each year in these cells as defined.

The fourth point in question is that so long as Mr. Hutchison is intensively engaged in prosecuting the sales of the so called gunfiring, signaling and lighting batteries, also batteries for wireless operation and emergency lighting aboard both foreign and domestic Government owned navy vessels, that Mr. Hutchison be allowed rights of sale for such batteries with the understanding that this right of sale, trusted to Mr. Hutchison will not deprive the Branch Offices of the Edison Storage Company, or any of its Subsidiaries or Affiliated Interests, from selling to any G

RESULT ACCEPTED

191

COPIES TO-

COPY FOR DIVISIONAL FOLLOW UP BINDER.

[ENCLOSURE]

- 2 -

mental Departments or Officials upon their solicitation to the aforementioned Branches, and with the understanding that such sales made by Branch Offices are not intended to deprive Mr. Hutchison from receiving his commission thereon. This, provided that nothing herein shall be interpreted as holding the Selling Division of the Edison Storage Battery Company and the Export Division of T. A. E., Incorporated, responsible for exercising more than reasonable diligence to the end that Mr. Hutchison's sales rights may be identified as such in the case of small sales of nominal value.

The purport of all of the foregoing paragraphs is that Mr. Hutchison has the exclusive right of making sales to the Navies of the World with the exception and understanding that this right is reserved to Mr. Hutchison only as long as Mr. Hutchison is intensively engaged in the promotion of sales of this class and as long as his work is satisfactory to T. Edison and the Edison Storage Battery Company.

The fifth point in question is that as long as Mr. Hutchison is intensively engaged in promotion of sales and his results obtained are satisfactory to Mr. Edison, that Mr. Hutchison shall have the sales right of Edison Storage Batteries to the War Department of the United States Government, but not to foreign governments. 5

The sixth point in question is that Mr. Hutchison shall have the sales right of batteries going into nearabouts of a shipyard or more actual candlepower for two years, i. e., until June 1, 1918, conditional upon such volume of business resulting from his intensive selling efforts as is satisfactory to Mr. Edison and the Edison Storage Battery Company. Jensen

The seventh point in question is that of the sale of Edison Storage Batteries for commercial vessels of American or foreign registry. In this connection Mr. Hutchison's relations are that of a Sales Representative in an absolutely open field. From such orders absolutely obtained by Mr. Hutchison as a result of his intensive selling efforts, Mr. Hutchison shall enjoy the sales right as herein defined as long as he is intensively engaged in securing sales of this class and so long as it is satisfactory to Mr. Edison. *and Mr. E. B. Co.*

It is assumed, however, that in case the Selling Division of the Edison Storage Battery Company, or the Export Division of T. A. E., Incorporated, either directly or through any of their regular marketing channels, should dispose of Edison Storage Batteries in a way which would ultimately result in their being used for one of the purposes covered by the above sales rights of Mr. Hutchison, the fact that Mr. Hutchison will draw to the attention of the Division Managers of the Selling Division of the Edison Storage Battery Company and the Export Division of T. A. E., Incorporated, that the sale in question is the result of his intensive selling efforts; and unless this matter is brought to the attention of these Division Managers in this manner by Mr. Hutchison within a reasonable time, these Division Managers will be right in assuming that Mr. Hutchison has no interest in the sale whatsoever, and will not receive credit therefor.

The purport of this memorandum to this point is to establish the fact that the above sales rights as defined herein are in fact all the sales rights which the Selling Division of the Edison Storage Battery Company and the Export Division of T. A. E., Incorporated, will be required by the Management to recognize.

[ENCLOSURE]

- 3 -

If, at some future date it should appear advisable to Mr. Hutchison, or the Selling Division of the Edison Storage Battery Company, Mr. Thompson, or the Export Division of T. A. E., Incorporated, Mr. Stevens, to change the sales rights of Mr. Hutchison, this can be done only in writing as a result of a conference of this committee for the purpose of making recommendations, subject to the approval of Mr. Edison and the Edison Storage Battery Company.

To summarize the aforesaid we wish to say that Mr. Hutchison's chief function in the organization is that of Chief Development Engineer Sales Representative of the Submarine Type of Edison Storage Battery, and that Mr. Hutchison is supposed to derive his chief revenue from the commissions accruing to him as the result of the sale of Submarine Type of storage batteries. ¹He enjoys an exclusive right to sell, subject to the conditions enumerated above, to this Government or other Governments of the world.

Considering the very large privileges enjoyed by Mr. Hutchison under this and other sales rights, it is our co-operative opinion that Mr. Hutchison should pay his own expenses. This is in line with the usual practice when working on commission in the general supply business, where the privileges enjoyed are not nearly as extensive or advantageous as those enjoyed by Mr. Hutchison.

In view of the one price policy which all of the Edison interests endeavor to maintain on their products, it is the understanding of this memorandum that Mr. Hutchison is not authorized to make any quotations other than list. It is also understood that Mr. Hutchison is not to offer any special inducements of any nature whatsoever, or to give any more favorable guarantee to the consumer than is standard for calls of the type in question at the time of making the quotation, guarantee, etc., unless the quotations are mutually agreed upon in writing between the Selling Division of the Edison Storage Battery Company or the Export Division of T. A. E., Incorporated, and Mr. Hutchison before quoting.

Signed for the Meeting,

S. B. Mansbert,

Financial Executive.

SBM/EGW

7

g

[ENCLOSURE]

THOMAS A. EDISON, INC.

B

ORANGE, N.J.

Oct 27 1917

Mr. Edison.

Since Jan 1st 1917, The Edison Storage Battery Co. has been selling storage Batteries to Miller Reese Hutchison Inc. under the terms of a contract that granted him certain exclusive sales rights etc. with which you are familiar. This contract was to remain in effect as long as the business produced by Miller Reese Hutchison Inc. was satisfactory to the Edison Storage Battery Co and Mr. Edison.

In order to properly determine whether the business produced since the contract became effective (for which months we have reasonably accurate data) I have had figures prepared which show the profit accruing to the Edison Storage Battery Co from the operations of M.R.H. Inc. In these figures I have also included December 1916 which was a big month for M.R.H.

During the 3 months - Dec. to July inclusive

*Read
and approved
by Mr. Edison*

[ENCLOSURE]

THOMAS A. EDISON, INC.

ORANGE, N.J.

Gross sales of \$135,135.52 were made by this concern, which cost us to manufacture \$105,398.56, giving us a gross profit of \$29,736.96 against which has to be applied a prorata share of our sales expense amounting to \$25,923.92 leaving a net profit to the Storage Battery Co of \$3,813.54.

The detail of making up these totals is on the attached sheets.

During the above period M.R.H. Inc. took in \$31,658.68 in commissions and discounts.

The above figures were compiled according to the best accounting practice of today and have been carefully checked. If anything they do not show all the charges that should be made against M.R.H. Inc. business rather than the other way.

Forgetting all question of profit to

[ENCLOSURE]

THOMAS A. EDISON

ORANGE, N.J.

The Edison Storage Battery Co, the method of arriving at which opens up the entire question of accounting practice, and considering only the total sales of \$125,000 for the eight months, it does not seem to me that the quantity can be considered satisfactory within the meaning of the contract.

During the past few months the Government has been a purchaser of storage batteries to an extent that would multiply many times the amount turned in by M.R.H. Inc. We know of much business of which we have received no share. I feel that M.R.H. Inc is not properly organized to cover adequately the highly important and widely distributed field in which this company has exclusive sales rights.

When the existing agreement was signed it was well understood that one of the principal reasons for forming

[ENCLOSURE]

THOMAS A. EDISON

ORANGE, N. J.

M. R. H. Inc. as a bone fide company, thereby putting Mr. Hutchison on a par, except for certain exclusive rights, with any other concern that purchases batteries from us for resale, and taking him out of the "commission man" class) was the consideration that the new Company would build an organization with a sufficient force of salesmen, service men etc and enough branch offices to properly attend to the Genl. business from Maine to California.

This sales organization has not materialized. M. R. H. Inc consists today solely of Mr. Hutchison whose office is in the laboratory just as before the new arrangement was made.

[ENCLOSURE]

THOMAS A. EDISON

ORANGE, N.J.

It is not reasonable to believe that it is humanly possible for one man to get more than a small fraction of the existing Govt. business.

He may be able to put thru a few big deals, it is true, but small lots that form the backlog of any business and tend to smooth out the manufacturing peaks must be neglected.

The Govt. burs in many places. Were it possible for one man to completely cover Washington alone he would be getting only a part of the total Govt. business. But in these strenuous days it is my opinion that no one man, giving his whole time and overtime, can even cover Washington adequately, much less a man who is occupied with many other problems of the Govt. that take him away for two or three weeks at a time.

[ENCLOSURE]

THOMAS A. EDISON, INC.

ORANGE, N.J.

In view of the above I recommend
(and this recommendation is shared
by others) that the present arrange-
ment with M.R.H. be terminated
and a new arrangement entered
into which does not involve any
exclusive sales privileges but places
Mr. Hutchinson on a real par with
all our other customers. Also, to
incorporate in this arrangement
some proviso that would make it
to his advantage to build M.R.H. Inc.
into a real organization.

Charles Edison

[ENCLOSURE]

EMERSON STORAGE BATTERY COMPANY

Statement of Income on Sales
by
L. R. HUSCHLSON - 1911 to 1916

F. O.
Use 2-2-24
FL

Sales*			
(As per schedule I)	100,550.00		
(" " " J)	350,309.04		
(" " " K)	<u>68,608.95</u>	519,767.99	
Cost to Make			
(As per schedule I)	52,327.68		
(" " " J)	292,346.31		
(" " " K)	<u>67,029.30</u>	412,503.86	
		<u>107,244.61</u>	
Cost to Sell - Expenses			
Commission (as per schedule D)	1076.12		
" (" " " I)	25083.72		
" (" " " J)	45617.70		
" (" " " K)	<u>9010.93</u>	81,896.47	
Other Expenses (" " " A)	18.13		
" " " " B)	195.51		
" " " " C)	10653.38		
" " " " D)	3857.95		
" " " " E)	300.15		
" " " " F)	67.35		
" " " " G)	1654.02		
" " " " H)	2136.27		
" " " " I)	3024.03		
" " " " J)	<u>22552.05</u>	44,160.64	125,757.31
Loss-			18,512.70

*This figure does not include amount due from
U. S. Government on S15 & S18 batteries, amount- \$33,424.65
When included there will show a profit of- \$14,911.95

[ENCLOSURE]

166-4-12-18---Prim.

HUTCHISON MILLER REESE (INC.).....ORANGE, N.J.
 Miller Reese Hutchison, Pres. & Trsas. Edison Laboratories.
 Wm. J. Field, Vice-Pres. Registered Office.
 A. B. Messerlin, Secty. Commercial Bank.
 DIRECTORS:- Officers and J.S.Perkins, Bldg. Jersey City, N.J.
 K. F. O'Hagan.

Our reporter interviewed Miller Reese Hutchison on Feb. 19th, 1917, when he stated that so far the company had paid in capital of between \$3,000 and \$4,000 and that he owned all of the stock with the exception of the directors shares, and personally would stand behind this company with his individual assets.

The company's place of business at Orange is located in the laboratory of Thomas A. Edison. Mr. Miller Reese Hutchison has held the position of engineering adviser to Mr. Edison for several years. He is an inventory and at one time owned the patent that manufactured the "Claxon" horn, and is said to have disposed of that business to the Lovell McConnell Co. of Newark, for in the neighborhood of \$300,000. Mr. Hutchison is a member of the Naval Consulting Board, and was appointed assistant to Thomas A. Edison who is President of the Storage Battery for Government and wireless purposes. The present company which was incorporated November 23, 1916, with an authorized capital of \$125,000 was formed for the purposes of taking over the rights which Mr. Hutchison owned individually. It is understood that there has been an effort to have the United States Government adopt the Edison Storage Battery for its submarines, and Mr. Hutchison, personally, has had charge of this work, and is the opinion that the subject company has prospects for doing a good business in the future. Of the officers, Wm. J. Field, Vice-Pres., is also Vice-Pres., of the Commercial Trust Co., of Jersey City, N.J. A. B. Messerlin, Secty., is Mr. Hutchison's private Secretary. Of the directors, J.S. Perkins, is Treasurer of the Commercial Trust Co., of Jersey City. Those interested are all in good personal repute and said very capable in a business way.

The company's fire record is clear.

TRADE OPINIONS:- In the trade no general credit has been sought at this time, but authorities believe that the company would take care of any obligation it might enter into especially with Mr. Hutchison, individually, behind it financially.

61-63.....Not.....Feb. 20, 1917.



[ENCLOSURE]

150-2-18-16---Add.

HUTCHISON MILLER REESE (INC.).....ORANGE, F. J.
Miller Reese Hutchison, Pres. & Treas. Edison Laboratories
Wm. J. Field, Vice-Pres. Registered Office
A. B. Beerlin, Secty. Commercial Bank
DIRECTORS: Officers and J. S. Perkins, Bldg. Jersey City, N.J.
J. F. O'Hagan.

Our reporter called at the above address on Dec. 3rd, 1917, but was unable to interview any of the officers.

Nothing is learned at this time that would materially alter the tenor of our previous report. They are understood to be doing a good volume of business. No estimate of the net worth is ventured.

FIRE RECORDS: Clear.

TRADE OPINIONS: They are not known as general seekers of credit, but in view of Mr. Hutchison's connections with the Thomas A. Edison they are recommended for trade requirements.

61-85.....NotDec. 4, 1917.

[ENCLOSURE]

West Orange, N. J. January 1, 1917.

Miller Reese Hutchison, Incorporated,

West Orange, N. J.

Attention Miller Reese Hutchison, President.

Gentlemen:

The following are the terms, conditions and prices upon which we, Edison Storage Battery Company, will fill your orders for Edison Storage batteries, and parts and accessories therefore:

Prices

Submarine batteries - our list price less \$13.50 per K.W.H.

Type A cells - 30% discount from our list price

Type B cells - 30% discount from our list price

Type C cells - 30% discount from our list price

Type J cells - 30% discount from our list price

Type M cells - 30% discount from our list price

Type W cells - 30% discount from our list price

Parts and accessories including electrotypes and battery boxes, same basis as other distributors at time of shipment.

The list prices mentioned shall be our standard list prices in effect at the time of shipment of goods hereunder.

In addition to the net prices provided for herein, we shall charge you such sums as may be necessary to cover such royalties as we may be required to pay Mr. Thomas A. Edison on batteries sold for use in foreign countries.

Terms

Net cash within thirty days from date of invoice with two percent (2%) discount for cash within ten days from date of invoice.

It is understood and agreed that all expenses, including those for advertising, entertainment, telegraph, messenger and long distance telephone service etc., incurred by you in connection with the sale of batteries supplied hereunder, shall be borne solely by you.

Except with our written consent, you are to dispose of goods purchased hereunder only for the following purposes:

(a) To fill orders for submarine batteries and parts and accessories therefor received from the United States Navy Department.

(b) To fill orders for submarine batteries and parts and accessories therefor for use in submarine vessels belonging to or for use by any and all foreign nations except Germany, Austria and Hungary.

(c) To fill orders taken by you for batteries, and parts and accessories therefor, from the following named Federal Departments of the United States: War, Navy, Treasury, Post Office, Interior, Commerce, Labor and Agriculture, including ignition and lighting batteries for gas cars, gun firing and sight lighting batteries and batteries for wireless operation and emergency lighting for use aboard United States Government owned vessels, but not including

[ENCLOSURE]

2.

batteries for the propulsion of vehicles of any kind whatsoever on wheels.

(d) To fill orders received by you for batteries, and parts and accessories therefor, for wireless operation on land or sea and for emergency lighting aboard vessels having American registry other than those owned by the United States Government.

(e) To fill orders received by you for batteries, and parts and accessories therefor, for use in portable searchlights employing lamps each rated at one thousand or more candle power.

It is understood and agreed that you shall not, unless authorized in writing by us, export nor sell for export, nor otherwise dispose of any batteries or parts or accessories therefor for export or shipment from the territory comprising the United States except submarine cells, the object of this provision being to protect us against the sale of batteries, parts and accessories for use in those foreign territories in which we have exclusive agreements with others.

It is understood and agreed that we shall not be liable for any delay in supplying goods hereunder due to any strike, fire, flood, war or any unavoidable cause, or due to inability to obtain or delay in obtaining material.

It is furthermore understood and agreed that the acceptance of any order from you shall be subject to such requirements as we may deem necessary to secure payment for the goods ordered, and we shall not be required to fill any such orders until you have satisfactorily met our requirements in this respect.

All deliveries of goods hereunder shall be f. o. b. our factory, Orange, N. J.

So long as this agreement shall continue, we will refer to you all of the following inquiries and orders:

All inquiries and orders for submarine batteries, parts and accessories received by us for use in submarine vessels belonging to or for use by the navies of any and all nations, including the United States, and excepting Germany, Austria and Hungary.

All inquiries and orders received by us for batteries for use in portable searchlights employing lamps rated at one thousand or more candle power, except such inquiries and orders as we shall receive from other parties with whom we now have exclusive contracts for the sale of such batteries, or for batteries for use in territory covered by such contracts and excepting also all inquiries and orders for Edison-La France hand lanterns and batteries for such lanterns and all inquiries and orders received from American-La France Fire Engine Company.

It is understood and agreed that no battery sold hereunder shall be guaranteed by us except under the standard guaranty of the Edison Storage Battery Company in use by us at the time of shipment of such battery and then only under the condition that the installation and equipment be approved by

[ENCLOSURE]

3.

us and that such guaranty be requested within sixty days from the date of shipment by us of the battery in question. Such guaranties are given by us only on cells used only within the limits of the United States which for this purpose shall be considered not to include its insular possessions, Alaska, or the Panama Canal Zone. It is also specifically understood and agreed that during this contract or any extensions of same, that you will not directly or indirectly sell or promote the sale of any Storage Battery other than that made by us.

This agreement shall continue only so long as your selling methods and the volume of business received by us from you shall be satisfactory to us and Mr. Thomas A. Edison, and if at any time your selling methods or the volume of business received by us from you shall be unsatisfactory to us or to Mr. Thomas A. Edison, or his successor in the ownership of the foreign selling rights covered hereby, we shall not be required thereafter to fill any orders hereunder or to refer to you any further orders or inquiries.

This agreement takes effect January 1, 1917, and supersedes and takes the place of any and all prior agreements with you and with your President, Mr. Miller Reese Hutchison, relating to sales of Edison Storage Batteries, and parts and accessories therefor, whether such prior agreements were made with Mr. Thomas A. Edison personally or with us.

Yours very truly,

Edison Storage Battery Company

Attest:

Arthur Mudd,
Secretary

By Thomas A. Edison,
President.

Accepted and agreed to:

Miller Reese Hutchison, Incorporated.

Attest:

N. R. Hutchison,
President
M. R. Hutchison

A. Meserlin
Secretary

APPROVED

Thomas A. Edison

[ENCLOSURE]

West Orange, N. J., January 1, 1917.

Miller Reese Hutchison, Incorporated,
West Orange, N. J.

Attention Miller Reese Hutchison, President.

Gentlemen:

In our agreement dated January 1, 1917, it is provided that you are not to sell Edison Storage Batteries for the purpose of propelling vehicles of any kind running on wheels.

Notwithstanding the above provision we hereby consent that, until further notice, you may sell to the United States Government such batteries as it may order from you to replace lead batteries in vehicles for propulsion purposes, and also to replace the Edison Batteries in certain trucks owned by the United States Government and used in the Philippine Islands, the battery equipment for which was originally sold through your President, Mr. Hutchison.

This consent shall not be construed to include initial battery equipment for the propulsion of vehicles, nor the replacement of Edison Batteries, for the propulsion of vehicles except in the aforesaid Philippine Island trucks.

Yours very truly,

Attest:

EDISON STORAGE BATTERY COMPANY

Arthur Mudd,
Secretary.

By Thomas A. Edison,
President.

Accepted and agreed to:

MILLER REESE HUTCHISON, INCORPORATED

By M. R. Hutchison,
President

Attest:

A. Messlin,
Secretary.

[ENCLOSURE]

EDISON STORAGE BATTERY COMPANY
Memorandum

April 25th, 1918.
HOT-2-901

Mr. Charles Edison and file:-

E
I am attaching hereto two letters written Stone & Webster prior to our quoting them 20% from our then list price. These letters are offered in evidence that we made every attempt to induce the Stone & Webster Co., who are acting for the Ordnance Department of the United States Government, to purchase the batteries that they might need through the Truck Manufacturers and not directly from us. This order was finally placed with the Baker R. & L. Co. of Cleveland for trucks and with the Electric Storage Battery Co. of Philadelphia for batteries, due primarily to the activities of Captain Daggett reporting to Col. King, in charge of the Ordnance Bases in France; and Captain Daggett was formerly the Manager of the Electric Storage Battery Company's office in San Francisco, and later represented the Baker Elec. Vehicle Company in California. I was also told that we did not stand particularly strong with Col. King of the Ordnance Department nor Stone & Webster acting for them, in that we attempted to force the purchase of batteries desired by the Ordnance Department from the Manufacturers of the Trucks and only quoted a special Government price when forced to by both Stone & Webster and the Ordnance Department.

F
The second department of the United States Government which we were forced to quote better than list price was a Cantonment Division under the direction of Captain Morse, in charge of purchases. Here, again, we attempted to secure list price and only at the last moment quoted a special price, and this order was lost to the Electric Storage Battery Co. of Philadelphia, whose batteries were used in the Fowell-Parker trucks.

These are the only two departments of the United States Government by whom we have been requested to name a special price, or to whom we have quoted better than our list price. The Cantonment Division have, however, purchased directly from us since this first order placed by them 34 sets of 35 cells A4 and 15 sets of 21 A5—all of which were shipped to Newport News, Va.—and in all probability will in the near future purchase a larger amount of our product. The order received by us was at our second list price less 20%. No one in the Selling Organization of the Edison Storage Battery Company has attempted to solicit business, nor have they quoted to any department of the United States Government on batteries other than for Industrial Truck or Tractor Service, with the exception of the 25,000 L-30's recently ordered by the Signal Corps, and with which you are familiar.

H. G. THOMPSON.

Enclosures -

[ENCLOSURE]

C O P Y

October 11th, 1918.
2-9044

E.

Mr. J. P. Fish,
c/o Stone and Webster,
920 "M" Street,
Washington, D. C.

Dear Sir:-

In compliance with your request of October 10th I will endeavor to give you an idea of the number of sets of Edison Batteries shipped to England and France for war purposes.

I cannot give you exact figures as we are represented in France and England by the Edison Accumulators, Ltd., and we make large shipments of cells and do not know for what purpose they are intended. We have, however, shipped approximately four hundred sets of batteries to England and France for Industrial Truck and Tractor service.

In February of this year the Automatic Transportation Company sold 55 trucks with 110 sets of batteries to the French Government, and recently the U. S. Government placed order with the Automatic Transportation Co. for 75 tractors with 150 sets of batteries, and the Lansing Company also sold the Government 40 tractors and 80 sets of batteries.

At least 85% or 90% of the Industrial Trucks and Tractors in service in the United States are equipped with Edison Batteries, as it has been repeatedly demonstrated that it is the only battery that will stand up under the hard service. The wheels are small and the batteries are subject to excessive vibration. The service for which your tractors are intended cannot possibly be any more severe than the service in the steel mill district in and around Pittsburgh. The floors in the steel mills are--almost without exception--rough, and experience has demonstrated that no other battery will stand up under this service except the EDISON. We do not know of a single battery in steel mill Industrial Truck or Tractor service in and around Pittsburgh except the EDISON.

You are doubtless aware of the fact that all trucks and tractors thus far purchased by the United States Government for service abroad have been equipped with EDISON BATTERIES.

I will see you in Washington and explain to you why we desire to sell our batteries to the Government through the Truck Manufacturers.

Trusting this is the information you desire, I am

Very truly yours,

Vice President,
General Sales Manager.

[ENCLOSURE]

C O P Y

October 16
1917

IRB-6-6427

Mr. J. F. Fish,
Stone & Webster,
923 "F" Street,
Washington, D. C.

Dear Sir:-

I wish to confirm certain statements made by both Mr. Mahaffey of our Company and myself in reference to our inability to quote less than list price on extra sets of batteries which the United States Government contemplates purchasing for use in tractors which rumor states are to be shipped abroad for the use of the American Army.

Over 75% of our output to-day is being sold directly or indirectly for Government purposes. The vast majority of our batteries for industrial trucks and tractors shipped to industrial manufacturers in this country are put to work in connection with the turning out of munitions and other war supplies.

The prices which we have to pay to-day for labor and raw material are such as to leave us an extremely narrow margin of profit, and it, therefore, becomes necessary for us to increase our prices effective November first.

Owing to our business relations with industrial truck manufacturers, and further to the fact that they are put to considerable expense and risk in handling batteries for use in their trucks, we have found it necessary for the best interests of all concerned to establish the fixed policy of allowing these manufacturers a discount from list price, the latter being our selling price to all ultimate consumers. This practice has been so long established that it forms a precedent which we cannot consider changing, and we believe you will recognize that it is based on sound business principles.

It is perhaps needless to say that Mr. Wilson has committed this Company to the policy of assisting the Government in every way possible to wage the war in which we are engaged and under these conditions it would be impossible for us to plan to make any excessive profit from transactions with the Government. If it were not for the fact that the war conditions have made our manufacturing costs very high, leaving us with practically no profit at the net prices based upon our present list prices, we might be able to make a special concession of some kind. Under the circumstances, however, we do not anticipate that this can be done even though a case should arise after our increased prices have gone into effect, because up to the present time we have undergone considerable sacrifice in order to refrain from increasing our prices and only under the utmost urgency have we finally been compelled to make a slight increase of 10%. Our costs are obviously already high, but the small increase which we contemplate will not become effective until November first, and, therefore, in the present instance the purchase under consideration virtually has the benefit of a discount equal to the difference between our present price and the new price which shortly will become effective. We have probably been almost the only concern in the country which has not increased the price of its product up to the present time, and under the proposed increase it is probable that our margin of profit is considerably less than is being obtained by almost any other manufacturer.

Very truly yours,

Vice Pres. & Gen. Sales Mgr.

[ENCLOSURE]

FORM 1270-1000 12-14

4572

REFERS TO FINANCIAL EXECUTIVE'S HANDSHEET NO. _____

4572

DATE: Jan 16, 1918.

FUNCTION IN QUESTION: All Functions of E. S. B. Co.
SUBJECT: Conference of Executive Committee of E. S. B. Co.
EFFECTIVE: _____
FOLLOW UP BY: Executive Committee of E. S. B. Co.

CONFERENCE:

Present: Charles Edison, Chairman.
R. A. Bachman, Vice President & Gen. Mgr. E. S. B. Co.
H. G. Thompson, Vice President & Gen. Sales Mgr. E. S. B. Co.
J. V. Miller, Vice President & Div. Mgr. Edison Chemical Works
Division of E. S. B. Co.
L. A. Marsh, (representing Mr. S. B. Lambert.)
Absent: S. B. Lambert, Vice President & Financial Executive.

MATTERS DISCUSSED:

71 - Sales Situation at Washington.

MATTERS TO BE DISCUSSED AT NEXT MEETING:

24 - #4607 - Stock of Finished Cells.
56 - #4623 - Standards - Fixed Prices on Storage Battery Cells.
60 - #4645 - Complaint - Objectionable Fumes at Silver Lake.
62 - #4636 - Employment of Chemist.
64 - #4639 - Price of Potash.
66 - #4644 - Requisition of Portion of Plant for Production of War Materials.

MATTERS TO BE DISCUSSED AT SUBSEQUENT MEETINGS:

11 - #4569 - Mass of Company Under which Sales of Edison Storage Batteries are to be made.
17 - #4584 - Monnet Agreements.
20 - #4602 - Reclaiming of Cells.
51 - #4618 - Sales Estimate.
57 - #4700 - Complaints - Service Charges.
58 - #4638 - Standards - Basis of Extended Credit to Customers.
65 - #4643 - Inquiry re Foreign Agency for Storage Batteries.

The minutes of the previous Meeting, December 5, 1917, were accepted as read.

All matters discussed are recorded in memoranda attached, which combined, comprise the Minutes of this Conference.

----- ccc -----

For the Conference,
Charles Edison,
Chairman.

Statement of Sales and Cost of Sales of W. R. Hutchins on from December 1, 1916 to July 31, 1917

Gross Sales Cost of Sales

Month	Type	Alt. Quor.	Quantity	Low Est. Equivalent	Amount	Type	Amount	Gross Profit	Total Gross Profit
December	R.H.	.50	730	11.5	1840.00	R.H.	961.96	878.04	
January	"	.50	730	11.5	1840.00	"	963.80	876.20	
February	"	.50	310	15.5	7357.00	"	1352.43	995.57	
March	"	.50	766	38.5	14277.60	"	2392.66	1288.94	
April	"	.50	5	2.5	78.00	"	21.43	65.57	
May	"	.50	85	15.5	1680.00	"	133.49	345.51	
June	"	.50	5	2.5	78.00	"	21.49	56.51	
July	"	.50	1745	877.5	4972.00	"	863.91	1741.09	
					<u>20505.60</u>		<u>14881.63</u>	<u>5623.97</u>	
December	R.H.V.	.5	50	25	4000.00	R.H.V.	2087.44	1912.56	
January	"	.5	20	101.5	16740.00	"	355.97	7680.03	
February	"	.5	221	115.5	18444.00	"	106.50	7338.50	
March	"	.5	575	262.5	2940.00	"	2792.12	647.88	
April	"	.5	60	30	4800.00	"	246.84	2145.16	
May	"	.5	110	55	7600.00	"	477.33	2816.67	
June	"	.5	80	40	5920.00	"	362.22	2257.78	
					<u>64240.00</u>		<u>5522.22</u>	<u>9101.06</u>	
December	R.L.	.75	5	3.75	5350.00	R.L.	2787	2713	
January	"	.75	100	75	770.00	Alt. Quor.	111	111	
February	"	.75			8250.00	R.L.	624.75	1125.25	
							<u>618.73</u>	<u>2060.77</u>	
December	R.L.V.	.75	120	90	13740.00	R.L.V.	615.81	1311.19	
January	"	.75	216	162	23760.00	"	1029.95	11320.05	
February	"				<u>36760.00</u>	Alt. Quor.	1370	1370	
							<u>1493.46</u>	<u>17525.24</u>	
February	R.H.								

[ENCLOSURE]

[FILMED IN SECTIONS]

1

2

May		50	5	15	16000		13349	3451	
June		50	5	15	16000		13349	3451	
July		50	1745	8775	877500		86091	174149	
					2050560		1488163		562297
December	1047X	50	15	15	40000	2047X	70874	19126	
January		5	203	1015	167400		35597	76303	
February		5	231	1155	186400		106505	78063	
March		5	255	1275	204000		207616	64381	
April		5	60	30	48000		24950	71048	
May		5	110	55	76000		47738	78164	
June		5	80	40	64000		36382	7211	
					264740		503826		310406

December	206	75	5	375	5500	206	7787	2713	
January						206	111	111	
July		75	100	75	77000	206	57978	18025	
					87500		61873		20627

December	206X	75	170	90	157000	206X	63581	63419	
January		75	216	162	207600		173995	113605	
February					369600	206X	1370	150	
							193946		1757654

February	614					614	219	21	4017
----------	-----	--	--	--	--	-----	-----	----	------

June	84	333	100	3333	67000	84	36617	75383	
May	85	417	60	75	47300	85	24579	17771	
July	89	75	25	125	78000	89	17610	8390	
					130300		78806		57494

April	708	103	5	15	1050	708	544	506	
December	7080	08	17	96	4700	7080	3870	330	
January		08	6	30	1400		810	590	
March		075	90	675	27050		15084	6768	
June		075	140	90	9800		7331	7469	
July		075	170	4	77400		28635	5765	16678
					67900		57777		

December	516					516	14994	14774	14994
January	56					56	14	14	14

December	517	189	175	3708	5739191	517	3793247	1266644	
January						517	28306	28306	
February					5139191		373245	574545	
							4289478		850473

January	201	175	168	2016	10600	201	34724	54176	
February		008	74	108	5750		17797	17040	
March		008	84	672	5250		40261	989	
April		008	168	1344	17363		5878	4386	
May		008	168	1344	16812		9051	6953	
June		008	5737	41356	147800		407613	55787	
July		008	1118	118	123200		70689	63211	
					621675		577114		84561

[ENCLOSURE]

[FILMED IN SECTIONS]

1

2

Statement of Sales and Cost of Sales of M.R. Kutchmann Inc. December 1, 1916 to July 31, 1917

<i>Gross Sales</i>				<i>Cost of Sales</i>							
Month	Type	Antiquor	Quantity	Spec. Ret. Guaranteed	Amount	Type	Amount	Gross Profit	Total Gross Profit for Month		
December	Pinto				76350		152287	14562			
January					47963		34168	13795			
February					103377		79765	4655			
March					46916		42647	4333			
April					104156		119396	6			
May					57665		66801	10861			
June					107889		80779	7196			
July					105909		42654				
					698104		590028		90707		
December	Specialty Light Equipment				146310		106498	39812	39812		
<i>Consolidation of Gross Sales and Cost of Sales</i>											
Month	Gross Sales	Cost of Sales	Gross Profit								
December	57641.51	48055.55	15085.96								
January	7953.63	7753.17	2000.46								
February	57133.2	7785.96	22352.24								
March	10972.94	5025.71	5947.23								
April	7439.19	2476.31	4962.88								
May	6751.74	5076.34	1675.40								
June	80346.9	6964.10	19708.79								
July	83702.94	27675.75	56027.19								
	136135.57	105998.58	30136.99								

[ENCLOSURE]

Selling Expense M. C. Hutchinson Inc

	1916 December	1917 January	1917 February	1917 March	1917 April	1917 May	1917 June	1917 July	Totals					
Office Clerk	1077.58	1744.6	1124.7	955.86	1377.96	2743.0	4763.4	1007.01	3550.91					
Shipping Expenses	611.82	46.9	58.21	152.64	55.70	35.35	78.77	53.90	1602.44					
Telephone	1024.76	220.5	46.5	691.94		650.53	72.94	11.30	2650.17					
Commissions	4451.82	1494.60	801.98	1952	1180.5	1096.5	7111.20		7706.80					
Traveling	168.4			85					176.7					
Entertainment	904	60							964					
Miscellaneous	351.36	5237.05	1564.64	934.77	367.37	734.3	737.54	22.30	5538.71					
Advertising				43.97	13.15	22.71	46.27	124.44	246.13					
Selling Expense					520	14.77	271.0	60.59	1077.6					
General Expense					390.70				390.70					
Interest on Investments								814.54	814.54					
Other Interest								75	75					
Bank Discount								421.28	421.28					
Totals	7813.18	7873.42	2827.21	1579.64	1082.93	1700.34	1370.74	3100.54	25773.42					

*Why are there selling expenses 86 by 2
Due to irregularity of sales in 1917 to sell 1916 goods*

[ENCLOSURE]

[FILMED IN SECTIONS]

1

2

Reconciliation of Income & Profit & Loss to M. C. Hutchinson Inc for November 1, 1916 to July 31, 1917

	December	January	February	March	April	May	June	July	Totals
Gross Sales	5364.51	7056.63	5710.68	10972.94	12391.9	8951.05	8254.67	23623.84	135195.55

Commission	4451.84	189660	80198	1950	11805	10965	11110	770680
Freighting	1684			35				1767
Entertainment	904	60						964
Miscellaneous	35136	543705	152964	93494	36737	7243	72104	72100
Advertising				4298	1315	7271	4627	12447
Selling Expense					530	1477	7710	6059
Service Expense					39070			39070
Interest on Investments								81454
Other Interest								75
Bank Discount								42148
Totals	721318	727244	754741	157962	108793	170034	137074	300546

Why are there selling expenses & freight & advertising cost in 1910 to 1912

Reconciliation of Income & Profit & Loss to M.R. Hutchinson & Co. from December 1 st 1916 to July 31 st 1917								
Gross Sales	December 53641.57	January 795363	February 571368	March 1097744	April 743917	May 645124	June 893469	Totals 3367354
Cost of Sales	4305550	475887	749596	802051	244631	529684	636410	2767574
Gross Profit	1058596	319476	308753	294793	51288	135440	187059	605321
Expenses	721318	727244	754741	157962	108793	170034	137074	300546
Net Profit	777278	417232	429712	116831	57005	65406	54285	304776

Reconciliation of Total Sales showing diff. since between selling price to M.R. Hutchinson & Co. from December 1 st 1916 to July 31 st 1917 and M.R. Hutchinson & Co. selling price to Government								
Total Sales	December 53641.57	January 795363	February 571368	March 1096444	April 743819	May 645124	June 812607	Totals 3366168
Handwritten to Government	53641.57	795363	571368	1096444	743819	645124	812607	3366168
Total to M.R. & Co.	6401013	444823	664075	1592234	357461	941534	1067497	4458947

do the figures make reconciliation with above.

[ENCLOSURE]

[FILMED IN SECTIONS]

1

2

Note: 4% Bank discount deducted by M.R. Hutchinson & Co. not allowed Government and taken up so in return.

Statement of Sales and Cost of Sales of M. C. Hutchinson and Co. from December 1, 1916 to July 31, 1917

Gross Sales:

Cost of Sales:

Month	Type	Alt. Equiv.	Quantity	In Alt. Equivalent	Amount	Type	Amount	Good Profit	Total Good Profit per 100 lbs.										
December	A 4	1	75	75	273.00	A 4	101.85	141.15											
February	"	1	77	77	246.27	"	243.32	102.95											
May	"	1	192	192	1514.42	"	1385.07	429.35											
June	"					"	3595												
July	"	1	105	105	227.25	Alt	744.85	197.32											
					339592	"	756114		834.78										
December	A 4 1/2	1	110	110	118.00	A 4 1/2	764.36	493.64											
February	"					Alt	432												
March	"	1	30	30	283.50	A 4 1/2	777.76	605.24											
May	"	1	210	210	1982.50	"	1570.48	402.02											
June	"	1	14	14	113.46	"	7744	7091											
July	"	1	2000	2000	1207.82	"	13722.40	3585.10											
					728740	"	1134752		1449.88										
April	A 5	1.25	40	50	469.00	A 5	330.55	138.45	133.45										
February	A 6					A 6 Alt	1709	1700											
April	"	1.3	6	9	8.00	"	552.25	745.75											
June	"					Alt	119.05	175.05											
July	"	1.5	2	25	10.00	A 6	22.27	120.3											
					1371.00	"	2105.6		710.50										
January	A 6 1/2	1.5	26	36	750.00	A 6 1/2	357.71	392.29											
February	"					Alt	522												
					750.00	Alt	362.71		357.79										
January	A 8	2	2	4	50.00	A 8	24.44	25.56											

Notes:

Do these figures include wire less - or only Good orders?
 Are the 5 1/2 1/2 figures for wire less batteries to know?
 So the engineering and development is done.
 In development of search light app in dot is done

[ENCLOSURE]

[FILMED IN SECTIONS]

1

2

December	R 4.7	1	110	110	118800	R 4.7	74434	47361	
January	"	"	"	"	"	Adpt	2133		
March	"	1	30	30	28355	R 4.7	77796	6054	
May	"	1	710	710	198765	"	158448	40607	
June	"	1	17	17	11346	"	9747	7091	
July	"	1	7040	7040	197710	"	1873240	384510	
					704710		1899157		444988
April	R 5	1.75	40	50	46900	R 5	33057	13848	13848
February	R 6	"	"	"	"	R 6 Adpt	1709	1728	
April	"	1.3	6	9	8000	"	5577	7153	
June	"	"	"	"	"	Adpt	11908	11908	
July	"	1.5	3	4.5	15700	R 6	5297	1203	7153
					15700		7153		
January	R 6.7	1.5	36	54	77000	R 6.7	35771	36777	
February	"	"	"	"	77000	Adpt	580		
							36771		35777
January	R 8	"	"	"	5700	R 8	218	218	
February	"	"	"	"	"	Adpt	218	218	
April	"	"	3	6	4680	R 8	1887	2793	
June	"	"	"	"	9880	Adpt	6747		7793
July	R 8.7	"	"	"	3640	R 8.7	7636	1004	1004
December	R 9	.75	6	1.5	2700	R 9	1469	1521	
January	"	.75	10	2.5	6000	"	7784	3776	
February	"	.75	10	2.5	6900	"	5988	4577	
March	"	.75	6	1.5	900	"	1873	900	
April	"	.75	87	21.25	7500	"	78770	10857	
May	"	.75	11	2.75	4620	"	3753	1367	
July	"	.75	"	"	59980	"	36947		73038
December	R 9.7	.75	66	16.5	32600	R 9.7	1837	72147	
January	"	.75	116	29	67600	"	91548	38057	
February	"	"	"	"	"	Adpt	734		
March	"	.75	600	150	787000	R 9.7	169533	87447	
April	"	.75	150	37.5	63000	"	43066	14937	
May	"	.75	105	26.25	44100	"	74420	16630	
June	"	.75	96	24	57600	"	37420	73477	700877
					575900		375078		
February	R 10	1.75	16	4	5600	R 10	1183	1183	
June	"	"	"	"	5600	Adpt	4077	468	
						R 10	5755		315

Do these figures include interest - or not? Good question.
Are the 5-12 figures for information sent to Bureau?
Do the 2-7 figures and development figures
Do the 2-7 figures and development figures
Do the 2-7 figures and development figures

[ENCLOSURE]

[FILMED IN SECTIONS]

1

2

[ENCLOSURE]

TELEGRAM

WESTERN UNION TELEGRAPH COMPANY

April 15, 1918.

M. R. Hutchison, President
Miller Reese Hutchison, Inc.,
1618 Eighteenth St., N. W.
Washington, D. C.

JUST RETURNED FROM SOUTH AND FIND FORMAL SIGNAL CORPS
CONTRACT, NO. 5434 ORDER NUMBER 41706 FOR TWENTY FIVE
THOUSAND BATTERIES OF L 30 CELLS, PRICE PER BATTERY FOUR-
TEEN DOLLARS AND SEVENTY FIVE CENTS INCLUDING BOX, READY
FOR SIGNATURE ON BEHALF OF EDISON STORAGE BATTERY COMPANY.
BEFORE SIGNING WISH TO CONFIRM UNDERSTANDING THAT YOU AND
YOUR COMPANY HAVE WAIVED ALL CLAIMS FOR COMMISSION OR OTHER
COMPENSATION IN CONNECTION WITH THIS ORDER, EXCEPT TWENTY
THREE CENTS PER BATTERY.

Charles Edison.

TELEGRAM

WESTERN UNION TELEGRAPH COMPANY

April 16, 1918.

M. R. Hutchison, President
Miller Reese Hutchison, Inc.,
1618 Eighteenth St. N. W.
Washington, D. C.

YOUR ANSWER TO MY WIRE OF YESTERDAY NOT YET RECEIVED.
MAY I NOT EXPECT REPLY WEDNESDAY MORNING IN TIME FOR
DIRECTORS MEETING.

Charles Edison

[ENCLOSURE]

THOMAS A. EDISON, INC.
EDISON PRIMARY BATTERY DIVISION.

F. J. LEPREAU
VICE PRESIDENT AND DIVISION MANAGER

30 CHURCH STREET, NEW YORK

My dear Charles:-

Government Centralization of Railroad Purchases.

Mr. Lepreau, upon his return from Washington, reported to Mr. Wilson and the writer relative to the probabilities of centralization of railroad purchasing by the Government. Mr. Lepreau reported that the Personnel conducting this work was composed largely of railroad men, practically all of whom were well known to himself personally, and that he was able to discuss the matter very freely with them.

10% Profit Contracts Favorable to Us.

Mr. Wilson gave expression to the thought that our present contracts with the railroads, permitting us a profit of 10%, would probably place us in a more favorable position than would the fixed price contracts of any of our competitors.

M. R. Hutchison Activities in Connection with Primary Battery.

Mr. Lepreau went to Washington because of a recent misunderstanding on a Primary Battery order, in connection with which we were under the impression that Mr. Hutchison had stated that he was our representative. Mr. Lepreau visited Major Raymond A. Klock, of the Signal Material Section, Equipment Division, 119 D St., N.E., as well as Lieutenant R. E. Belay and Lieutenant Walsh, all of whom were connected with different branches of the Government and are located at different addresses. These men were all under the impression that Mr. Hutchison was the manufacturer of Edison Primary Batteries. It was because of the fact that they had been led by Mr. Hutchison to believe that he was the manufacturer that Major Klock had pointed out to Mr. Hutchison that the Western Electric Company and the National Electric Company were quoting prices on Primary Batteries supposedly manufactured by him which were less than the prices which Mr. Hutchison, as the manufacturer was quoting direct.

"Gratis" Services.

It also appears that although Mr. Hutchison in various interviews which he has had with Mr. Wilson and Mr. Lepreau had insisted that he is doing this business gratis, and without any commission, with the sole purpose of helping out Thomas A. Edison, Incorporated, yet in quoting to the Government he has added what amounts to 7% in payment of his own gratis services.

DICTATED TO AND TRANSCRIBED FROM THE EDISON DICTATING MACHINE

[ENCLOSURE]

- 2 -

Overcharges.

The order in question was for 2,000 type #207 complete cells, upon which Mr. Hutchison quoted a price of \$3.00, while Mr. Lepreau figured the order upon a quoted price of \$2.80; also 2,000 renewals upon which Mr. Hutchison's price was \$1.38, and Mr. Lepreau's figure \$1.35.

Conclusions.

In view of the fact that all of this transpired after Hutchison had been to see you, and Mr. Wilson, Mr. Lepreau and myself, and each of us individually had requested him to keep his hands off this Primary Battery business, I cannot believe otherwise than that Hutchison has been misrepresenting the facts pretty strongly, not only to us, but of course to people with whom we have been dealing.

Handwritten signature
△

[ENCLOSURE]

Edison Storage Battery Co.

CHARLES EDISON
CHAIRMAN
OF THE BOARD

TRADE MARK
Thomas A. Edison

ORANGE, N. J., U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
R. S. HANSEY VICE-PRESIDENT
ROBERT A. BACCHANI TREASURER
H. S. THOMPSON SECRETARY
H. F. MILLER VICE-PRESIDENT
ARTHUR HUDG VICE-PRESIDENT

March 7, 1918.

My dear Charles:-

Today, at noon, I was with several of our good bankers at the dinner tendered by the Merchants Association to Lord Reading, and in the course of our conversation one of our bankers said,

"Is that man Hutchison still with you? I consider him more of a liability than an asset. He certainly has done Mr. Edison and the Edison Interests more harm than any one man who has ever been connected with Mr. Edison. I tell you, Mambert, the trouble with Hutchison is that he is trying to boost himself up by knocking other people down."

Faithfully yours,

Stephen B. Mambert

Mr. Charles Edison,
Chairman of the Board.

[ENCLOSURE]

CHARLES EDISON
BROTHER
OF THE BOARD

THOMAS A. EDISON, INC.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
S. B. HANFORD VICE-PRESIDENT AND
 FINANCIAL EXECUTIVE
C. H. WILSON VICE-PRESIDENT AND
 SPECIAL AGENT
H. F. MILLER TREASURER

ORANGE, N.J. March 8, 1918.

Dear Charles:

Several times Mr. Hutchison has asked if he could not be the Army and Navy representative of the Edison Primary Battery business of Thomas A. Edison, Inc. and on each and every occasion when this matter has been brought up by Mr. Hutchison, the Executive Committee of Thomas A. Edison Inc. has definitely advised him, and also yourself, Mr. Wilson and I have individually told him that we did not care to extend his activities beyond the field which he was now covering as we thought that better results could be obtained by his concentration on the Edison Storage Battery business.

In view of the above facts, I wish you to know that during the absence of yourself and Mr. Edison, Mr. Hutchison has involved us in a nasty entanglement with the Government people, and with the Western Electric Company, our largest distributor, by his endeavors to secure Primary Battery business.

The Executive Committee of Thomas A. Edison, Inc., namely Mr. Wilson and myself have asked him to keep his hands off of this business, and the matter is now being straightened out as satisfactorily as it is possible so to do after the harm has been done.

This is for your information.

Marblet
△

Mr. Charles Edison,
Key West, Fla.

[ENCLOSURE]

581

Thomas A. Edison, Incorporated

Primary Battery Sales Division

EDISON PRIMARY BATTERY SALES DIVISION MEMORANDUM NO 364

March 14, 1918

FILE: Mr C H Wilson - Personal
SUBJECT: Trip to Washington

Mr C H Wilson:

Regarding my trip to Washington last week, in connection with primary battery business originating with the United States Signal Corps, I beg to report as follows:

I called on Lt R E Bely, whom I found has charge of specifying the various electrical materials used by the Signal Corps, and from him I learned some of the details concerning the activities of Mr Miller Reese Hutchison, at Washington.

It seems that Mr Hutchison has been asked to state whether or not he is the manufacturer of the Edison Primary and Storage Batteries, in which case the Government Officials would do business with him direct, as it seems to be the desire of these officials to eliminate jobbers and dealers. Lt Bely informed me that Mr Hutchison assured him of being an official representative of all of the Edison Interests in Washington, and that while he was not the manufacturer of the batteries, he was there as their direct representative. On the strength of this the order in question was given to him after he was allowed to see prices submitted by some of the jobbers on this order, with the understanding that his prices to the Government would be no higher than the lowest prices quoted by anyone. This order had been marked for the Western Electric Company, as we had not been asked to quote on same.

Lt Bely informed me that Maj R A Klock, Chief of Signal Material Section Equipment Division, United States Signal Corps would be pleased to see me in order to get the status of Mr Hutchison's connection definitely settled. Before replying to Lt Bely he took me

[ENCLOSURE]

Mr C H Wilson
Sheet No 2

March 12, 1918

to Maj Klock's office where practically the same questions were asked of me. I informed the gentleman that Mr Hutchison has no authority to claim to be the representative of the Primary Battery Interests of the Thomas A Edison, Incorporated, in Washington or anywhere else, that this Division has no direct representation in Washington, and that we much prefer to handle the business direct as we feel we can render the Government better service. Maj Klock told me that Mr Hutchison had been getting a good many orders for Edison Storage Batteries through the same representation and wanted to know from me the status in this connection. I informed the Major that I was not in a position to answer for the Edison Storage Battery Company, and suggested that he write that Company for whatever information he desires on the subject.

The order had been returned to them by Mr Hutchison, and will be placed with us direct, or through the Western Electric Company, with whom we are on rather friendly terms on account of the large amount of telephone business they do with our concern.

Concerning deliveries, I suggested to Maj. Klock that one of the chief causes for delay in filling their orders is on account of the steel enameled jars they require for the cells, as the manufacturers of these jars require in the neighborhood of sixty days time to fill their orders, and I suggested that they anticipate their requirements as far ahead as possible with a view of enabling us to order sufficient stock of the jars and have them on hand to meet their needs. Maj. Klock promised to go into this matter thoroughly and advise me in the near future.

I found all these people very well disposed toward us, and I do not anticipate any trouble in continuing to secure the business by keeping in closer touch with them than we have in the past.

[ENCLOSURE]

Mr C H Wilson
Sheet No 3

March 12, 1918

I also called on the Bureau of Foreign Railways, Mr Samuel Felton, Chief, from whom we have received, through Mr Hutchison and through jobbers, orders for our Railway Signal Association Cells for use on the French Railways. Mr Felton turned me over to one of his Assistants, Mr J M Milliken, who has direct charge of these matters, and he informed me that all of their buying is done by Mr I B Thomas, connected with the Purchasing Department of the Pennsylvania Railroad, at Philadelphia. I was not able to see Mr Thomas, but will endeavor to get in touch with him at a very early date.

I also called on Mr S Forcher, formerly General Purchasing Agent of the Pennsylvania Railroad, and now in direct charge of railway purchases under Director General of Railways, William G McAdoo. I did not see Mr Forcher personally, but I saw his first Assistant, Mr C Morris, who, fortunately, is an old employ of the Purchasing Department of the Pennsylvania Railroad, and is acquainted with our Company and our material as well as being familiar with our contract with the Pennsylvania Railroad of this year. Mr Morris informed me that it is very likely that Regional Purchasing Agents may be appointed under each of the Regional Railway Chiefs reporting to Mr McAdoo, and that as the Regional Chief for the Middle West is Mr R H Alahnton, President of the Chicago & Northwestern Railroad, Mr L S Carroll, now General Purchasing Agent of the Chicago & Northwestern may be appointed Regional Purchasing Agent for the Middle West. This might prove somewhat disastrous to us because the Chicago & Northwestern is one Road in the Central West who have persistently refused to buy our material in years past, and as the Chicago Headquarters, which covers a most important territory for us may be so organized, it is my intention to keep in close touch with Mr Morris, at Washington, in order to prevent some drastic move on the part of Mr Carroll should he be appointed.

There is no question in my mind that before many months have passed

[ENCLOSURE]

Mr. C. H. Wilson
Sheet No. 4

March 12, 1918

a move will be made at Washington to enter into general contracts covering all of the railroads needs, and as our standing in Washington seems to be very good at present, we should endeavor to anticipate this move and try to show Mr. Forcher the advisability of taking general action covering all of the railroads in the country before a hostile move is made by some of the Regional Purchasing Agents who may not prove friendly to us.

This is a point I believe deserves thorough consideration, and discussion, and I should be glad to have an opportunity to take it up with you upon my return from Chicago in about ten days or two weeks.

F. C. McGraw

W.L:CRK

THOMAS A. EDISON, INC.

March 15, 1918.

Dear Charles:

Regarding his trip to Washington, I have already told him that he must from now on keep in very close touch with the different people there, and by doing so I believe we will obtain more than our share of the Government's primary battery business.

Concerning the one order which he obtained and which brought this matter up, you will note in the report from Lepreau that the Government has cancelled it with Hutoh and it will be placed with you, since it is for Hutoh or for Hutoh's people. I had my interview with Hutoh I told him it could be handled in one of two ways, either through him at the price he had been quoted, or by us direct; if through him, he could enjoy whatever profit he wanted from it, through us, it would be for the Government's mission. Now that there is a possibility of its going through the Western Electric Co., I have told Lepreau to still allow him the \$5 if it goes through them. I thought it better to give him this money than to have him have the matter on with a kick that he had done work for without compensation.

Yours very truly,

1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100
 101
 102
 103
 104
 105
 106
 107
 108
 109
 110
 111
 112
 113
 114
 115
 116
 117
 118
 119
 120
 121
 122
 123
 124
 125
 126
 127
 128
 129
 130
 131
 132
 133
 134
 135
 136
 137
 138
 139
 140
 141
 142
 143
 144
 145
 146
 147
 148
 149
 150
 151
 152
 153
 154
 155
 156
 157
 158
 159
 160
 161
 162
 163
 164
 165
 166
 167
 168
 169
 170
 171
 172
 173
 174
 175
 176
 177
 178
 179
 180
 181
 182
 183
 184
 185
 186
 187
 188
 189
 190
 191
 192
 193
 194
 195
 196
 197
 198
 199
 200
 201
 202
 203
 204
 205
 206
 207
 208
 209
 210
 211
 212
 213
 214
 215
 216
 217
 218
 219
 220
 221
 222
 223
 224
 225
 226
 227
 228
 229
 230
 231
 232
 233
 234
 235
 236
 237
 238
 239
 240
 241
 242
 243
 244
 245
 246
 247
 248
 249
 250
 251
 252
 253
 254
 255
 256
 257
 258
 259
 260
 261
 262
 263
 264
 265
 266
 267
 268
 269
 270
 271
 272
 273
 274
 275
 276
 277
 278
 279
 280
 281
 282
 283
 284
 285
 286
 287
 288
 289
 290
 291
 292
 293
 294
 295
 296
 297
 298
 299
 300
 301
 302
 303
 304
 305
 306
 307
 308
 309
 310
 311
 312
 313
 314
 315
 316
 317
 318
 319
 320
 321
 322
 323
 324
 325
 326
 327
 328
 329
 330
 331
 332
 333
 334
 335
 336
 337
 338
 339
 340
 341
 342
 343
 344
 345
 346
 347
 348
 349
 350
 351
 352
 353
 354
 355
 356
 357
 358
 359
 360
 361
 362
 363
 364
 365
 366
 367
 368
 369
 370
 371
 372
 373
 374
 375
 376
 377
 378
 379
 380
 381
 382
 383
 384
 385
 386
 387
 388
 389
 390
 391
 392
 393
 394
 395
 396
 397
 398
 399
 400
 401
 402
 403
 404
 405
 406
 407
 408
 409
 410
 411
 412
 413
 414
 415
 416
 417
 418
 419
 420
 421
 422
 423
 424
 425
 426
 427
 428
 429
 430
 431
 432
 433
 434
 435
 436
 437
 438
 439
 440
 441
 442
 443
 444
 445
 446
 447
 448
 449
 450
 451
 452
 453
 454
 455
 456
 457
 458
 459
 460
 461
 462
 463
 464
 465
 466
 467
 468
 469
 470
 471
 472
 473
 474
 475
 476
 477
 478
 479
 480
 481
 482
 483
 484
 485
 486
 487
 488
 489
 490
 491
 492
 493
 494
 495
 496
 497
 498
 499
 500
 501
 502
 503
 504
 505
 506
 507
 508
 509
 510
 511
 512
 513
 514
 515
 516
 517
 518
 519
 520
 521
 522
 523
 524
 525

[ENCLOSURE]

Edison Storage Battery Co.

CHARLES EDISON
EDISON
OF THE EDISON

THOMAS A. EDISON
TRADE MARK
Thomas Edison

ORANGE, N.J., U.S.A.

OFFICE OF
VICE-PRESIDENT AND FINANCIAL EXECUTIVE

THOMAS A. EDISON PRESIDENT
E. E. HANLEY VICE-PRESIDENT AND
MANUFACTURING MANAGER
ROBERT A. BATHMAN VICE-PRESIDENT AND
SALES MANAGER
H. S. THOMPSON VICE-PRESIDENT AND
FINANCIAL MANAGER
H. F. MILLER TREASURER
ARTHUR WOOD SECRETARY

March 2, 1918.

Handwritten: K

Dear Charles:-

At the Executive Committee Meeting of the Edison Storage Battery Company, held Thursday, February 28, Mr. Boehman told us the Government intended to take over the factory, diverting the entire output to the Signal Corp. In this event, we will not be allowed any cost for advertising or selling expense. Thus, we will be faced with the alternative of either keeping up a non-productive sales organization during the war or of building up a new one at its close.

In connection with increasing the schedule of production at the Chemical Works from 8000 to 4000 A-4-Equivalent cells a day, Mr. Miller is ordering a new dryer from the Philadelphia Textile Machinery Company which has a daily capacity of 1000 A-4-Equivalents and will effect a considerable time saving in drying Iron Mix. In the event it does not effect a time saving sufficient to offset the necessity of scrapping the old dryers, we are incurring only shipping and installation expenses. In the event this dryer does prove satisfactory, I have instructed Mr. Miller to negotiate for the same price on three additional dryers, as I understand the price on this equipment is to be advanced.

The enclosed advertisement which appeared in "Professional Memoirs" was authorized by M. R. Hutchinson Incorporated, without our knowledge. This has caused considerable unfavorable comment, dealing as it does with the nationality of Battery Manufacturers. Accordingly, I have asked Mr. Thompson to notify M. R. Hutchinson, Incorporated, that any advertising they contemplate in connection with Edison Storage Batteries, must first have the approval of the Executive Committee.

Faithfully yours,

Mr. Charles Edison,
Ft. Myers, Florida.

Handwritten: Newbitt
△

PROFESSIONAL MEMORANDUM

xxxx

THE
ONLY
ALL AMERICAN
STORAGE BATTERY

Invented by—AN AMERICAN
Manufactured by—AN AMERICAN
Recommended and Sold by—AN AMERICAN

The
Brutally Rugged
Edison Storage Battery

When you arrive "over there" you will find thousands of Edison Storage Batteries in active, drastic service, being slammed around, fed on *alkaline water* in lieu of distilled water, and splendidly upholding the reputation of their **ALL AMERICAN** lineage.

Don't forget—the **only ALL AMERICAN Storage Battery**, built especially for our **All American** forces.

NOTE: There is no **Lead** or **Acid** used in its construction, and it is the only Storage Battery made of **Iron and Steel**.

THE ONLY ALL-AMERICAN STORAGE BATTERY
ORANGE, N. J., U. S. A.

IN ANSWERING ADVERTISEMENTS, PLEASE MENTION PROFESSIONAL MEMORANDUM

[ENCLOSURE]

MINING EXPLORATION COMPANY OF NEW JERSEY AND RELATED RECORDS

This collection covers the period 1900-1952 and relates primarily to Edison's interest in securing sources of nickel and cobalt for use in storage batteries. Many of the records pertain to the activities of Edison's brother-in-law, John V. Miller. Throughout the period 1901-1904 Miller supervised magnetic surveys, diamond-drilling operations, land patent applications, and nickel searches in the Sudbury district of Ontario. During some of this time he was the agent of the Mining Exploration Company of New Jersey (MECNJ), a company organized in 1902 to finance Edison's nickel explorations. Miller also conducted magnetic surveys in Connecticut and Pennsylvania. In 1907 he began administering Edison's Canadian properties. In that capacity he attempted to sell, lease, or option the Darby Mine, a cobalt-bearing property in the Nipissing (later Timiskaming) district of Ontario, which had been purchased with funds from the Edison Storage Battery Co. in 1905. After Edison's death, Miller served as secretary of Edison's estate. He also sat on the board of directors of MECNJ during 1933, when the company was dissolved.

Most of the material dates from the period before 1907. The documents reflect the business of MECNJ, the administration of Edison's mining projects and real estate interests in Ontario, and the disposition of the Canadian properties by Edison's estate. Included are administrative and financial documents; articles of association; minutes from directors' meetings; correspondence, notes, drawings, and lists; notebooks; and reports. There are also accounts and vouchers, property records, contracts and leases, and other legal documents. A finding aid for the archival record group is available at the Edison National Historic Site. Related records can be found in the Document File Series, Notebook Series, Laboratory Records Series, and Family Records Series.

The records are arranged in seven series: (1) Corporate Documentation; (2) Thomas A. Edison Files; (3) John V. Miller Files; (4) Letterbooks; (5) Field Operations Records; (6) Financial Records; and (7) Property Records [not selected].

Corporate Documentation. These records cover the period 1902-1917, with a few items from the 1930s. They consist of articles of incorporation, bylaws, resolutions and minutes of the board of directors, agreements, licenses, correspondence, notes, and trial balances. Also included are a memorandum by attorney Henry Lanahan summarizing the history of MECNJ, a statement by Miller of Edison's assets and liabilities at the time of his death, and other items relating to Edison's estate.

Thomas A. Edison Files. These records cover the period 1900-1916, with most of the material dating from 1901-1908. Included are notes and drawings in Edison's hand, correspondence addressed to Edison, and prospecting reports. The documents relate to nickel and cobalt mines, ore samples, the purchase of ores, and property rights. Much of the correspondence pertains to the administration of Edison's mining properties in the Sudbury and Nipissing districts of Ontario, but there are also letters concerning property in Oregon, Connecticut, and elsewhere. A few items relate to Edison's interest in magnetic surveying and to a request from the U.S. Geological Survey for a hand-held magnetic separator. There is also an undated report by an unidentified author concerning the international nickel industry.

John V. Miller Files. These records cover the period 1901-1952, with most of the material dating from 1902-1904. Included are correspondence, reports, legal documents, equipment inventories, and other items relating primarily to the administration of mining surveys and properties in Ontario. There are documents pertaining to drilling operations, mining rights, and land leases, along with others dealing with expenses, equipment, and taxes. Several letters concern the acquisition and use of a magnetic dipping needle and a diamond drill. The material from the period after 1904 relates mainly to efforts to sell or option Edison's properties; after 1931 Miller conducted these activities on behalf of Edison's estate.

Letterbooks. These five letterbooks cover the period 1902-1913. They contain tissue copies of outgoing correspondence, mostly written by Miller as agent of MECNJ. There are also letters by other company officials, including Edison, Walter S. Mallory, and John F. Randolph. Most of the correspondence relates to leases, prospecting, equipment, and expenses. Also included are items pertaining to company finances.

Field Operations Records. These records cover the period 1900-1905, with some undated items that are possibly from the 1890s. They consist of notebooks, field journals, reports, maps, and other documents relating to mining surveys and drilling operations in Ontario, Connecticut, Pennsylvania, and other locations.

Financial Records. These records cover the period 1901-1931, with most of the documents dating from 1901-1904. They consist of a ledger and a journal, along with cash books, vouchers, check stubs, unbound statements, and other items relating to the financial affairs of MECNJ. Included are entries pertaining to the accounts of Edison, Miller, and investors James Gaunt and Charles M. Schwab.

Property Records [not selected]. These records cover the period 1901-1932, with most of the documents dating from 1901-1903. They consist of leases and other documents relating to mining properties in the Sudbury district of Ontario. Many of the documents concern the transfer of mining leases and several bear Edison's signature.

**MINING EXPLORATION COMPANY OF NEW JERSEY
AND RELATED RECORDS
CORPORATE DOCUMENTATION**

The Mining Exploration Co. of New Jersey, established in May 1902, was organized to finance Edison's nickel prospecting and mining activities outside of New Jersey. Under a trust agreement of June 28, 1902, the majority of the company's stock was controlled by Edison, the Edison Storage Battery Co., and Charles M. Schwab, industrialist and founding president of United States Steel Corp. Other investors included James Gaunt, New York businessman; James Gayley, metallurgist, inventor, and official in U. S. Steel; and William S. Pilling and Theron I. Crane, Philadelphia iron and coal merchants. Edison served as the company's president; his longtime associate, Walter S. Mallory, was vice president; and his private secretary, John F. Randolph, was secretary-treasurer. The company paid for Edison's mineral explorations during 1902 and 1903; it was inactive thereafter and dissolved in 1933.

The documents in this folder cover the period 1902-1917, with a few items from the 1930s. They consist of articles of incorporation, bylaws, resolutions and minutes of the board of directors, agreements, licenses, correspondence, notes, and trial balances. A memorandum from attorney Henry Lanahan to Charles Edison, dated September 27, 1917, summarizes the history of MECNJ. Some documents pertain to the writing off of investments in the Darby Mine as losses against the Edison Storage Battery Co. At the end of the folder is a letter from John V. Miller to George J. Valin of Sudbury, Ontario, enclosing a statement of Edison's assets and liabilities outside of Ontario at the time of his death and other items relating to Edison's estate.

Approximately 80 percent of the documents have been selected. The unselected material includes a stock certificate book covering the period 1902-1933.

CERTIFICATE OF
ORGANIZATION

OF
MINING EXPLORATION COMPANY
OF
NEW JERSEY

Dated May 1, 1902.

HOWARD W. HAYES,
COUNSELLOR AT LAW,
765 BROAD STREET,
NEWARK, N. J.

JOHN R. FARMER, PRESIDENT, NEWARK,
765 BROAD STREET.

JOHN R. FARMER, PRESIDENT, NEWARK, N. J.

THIS IS TO CERTIFY, that the undersigned do hereby associate themselves into a corporation, under and by virtue of the provisions of an act of the Legislature of the State of New Jersey, entitled "An Act Concerning Corporations (Revision of 1896)" and the several supplements thereto and acts amendatory thereof, and do severally agree to take the number of shares of capital stock set opposite their respective names.

FIRST: The name of the corporation is-

"MINING EXPLORATION COMPANY OF NEW JERSEY"

SECOND: The location of the principal office in this state is at Number 765 Broad Street, in the City of Newark, County of Essex. The name of the agent therein and in charge thereof, upon whom process against this corporation may be served is John R. Farmer.

THIRD: The objects for which this corporation is formed are: To explore for and locate mines and mineral rights; to build and operate mining railroads outside of the State of New Jersey; to acquire by purchase or otherwise patents, patent rights and licenses under patents; to carry on the business of metallurgic reduction and of mining, milling, concentrating, converting, smelting, treating, preparing for market, manufacturing, buying sell-

ing, exchanging and otherwise producing and dealing in all kinds of ores, metals and minerals, and in the products and by products thereof of every kind and description, and by whatsoever process the same can or may hereafter be produced; and generally and without limit as to amount, to buy, sell, exchange, lease, acquire and deal in lands, mines and minerals, rights and claims, and in the above specified products, and to conduct all business appurtenant thereto.

The corporation shall have power to conduct its business in all its branches, have one or more offices, and unlimitedly to hold, purchase, mortgage and convey real and personal property in the State of New Jersey, and as well in all other States, and in foreign countries.

FOURTH: The total authorized capital stock of this corporation is TWO HUNDRED AND FIFTY THOUSAND DOLLARS divided into twenty five hundred shares of the par value of One Hundred Dollars each.

FIFTH: The names and post-office addresses of the incorporators and the number of shares subscribed for by each, the aggregate of such subscriptions being the amount of stock with which the company will commence business, are as follows:

<u>Name</u>	<u>Post Office Address</u>	<u>Shares</u>
William Pelzer	New York, N.Y.	Four
John E. Helm,	Newark, N. J.	Three
Frederick C. Fischer,	Newark, N. J.	Three.

SIXTH: The period of existence of this Company is unlimited.

IN WITNESS WHEREOF, we have hereto set our hands and seals the first day of May, Nineteen hundred and Two.

SIGNED, SEALED AND :

DELIVERED IN THE PRESENCE OF -

WITNESSES OF -

Edw. H. Dwyer

William Pelzer (S.)

John E. Helm (S.)

Frederick C. Fischer (S.)

State of New Jersey :

County of Essex :

ss BE it remembered that on this

first day of May,

Nineteen hundred and Two, before me a Master in Chancery, of New Jersey, personally appeared William Pelzer, John E. Helm and Frederick C. Fischer, who I am satisfied are the persons named in and who executed the foregoing certificate, and I having first made known to them the contents thereof, they did each acknowledge that they signed, sealed and delivered the same as their voluntary act and deed for the uses and purposes therein set forth.

Edw. H. Dwyer
Master in Chancery
of New Jersey.

Endorsed

"Received in the Clerk's Office of the County of Essex, on
the 1st day of May A.D. 1902, and recorded in Book 24 of In.
Bus. Co's. for said County, Page 203

William O. Kuebler,

Clerk."

"Filed May 2 1902

S. D. Dickinson

Secretary of State."

STATE OF NEW JERSEY.



DEPARTMENT OF STATE.

J. S. D. DICKINSON, Secretary of State of the State of New Jersey, do hereby Certify, that the foregoing is a true copy of the Certificate of Incorporation of "Mining Exploration Company of New Jersey,"

and the endorsements thereon, as the same is taken from and compared with the original filed in my office on the Eleventh day of May A. D. 1902, and now remaining on file therein.

In Testimony Whereof, I have hereunto set my hand and affixed my Official Seal, at Trenton, this Eleventh day of May A. D. 1902



J. S. Dickinson
Secretary of State.

[MAY, 1902]

BY LAWS OF THE MINING EXPLORATION COMPANY OF NEW-
JERSEY

1.

The number of Directors shall be five of whom three shall
be a quorum. They shall be elected by the stockholders at
annual
their regular meeting and shall hold office for one year
and until their successors shall be elected.

Directors.

2.

The officers of the Company shall be a President, a Sec-
retary and a Treasurer, who shall be elected by the Board of
Directors and shall hold their respective offices for one
year and until their successors shall be elected.

Officers

3.

The Board of Directors shall appoint such other minor
officers and agents as they shall deem advisable, and may
delegate this power to the

Minor
Officers

4.

The Board of Directors shall fix the salaries of all
officers and agents of the Company.

Salaries

5.

Vacancies among the officers or directors shall be filled
by the Board of Directors

Vacancies.

6.

The Board of Directors shall regularly meet on the
first Tuesday of the month of June, and December, in each
year. Special meetings shall be called by the President
at the request of two directors and two days notice shall be
given of the same. The meetings within this State shall

Directors
Meetings.

1.

be held at West Orange.

At xxx meetings the order of business shall be

1. Roll call
2. Reading of minutes.
3. Reports of standing committees.
4. Report of Special committees.
5. Unfinished business.
6. New business
7. Adjournment.

7.

Stockholders meetings.

An annual meeting of the stockholders for the election of directors shall be held at West Orange on the first Tuesday in June of each year at twelve o'clock noon, and the polls shall remain open one hour. Notice of such meeting shall be given by the secretary by mailing a notice to each stockholder at least five days before such meeting.

8.

Treasurers Bond

The Treasurer shall give a bond to the company in such sum and with such sufficient sureties as shall be approved by the Board of Directors.

9.

Dividends.

The Board of Directors shall have the power to declare dividends semi-annually out of the net profits of the Company.

10.

Stock certificates.

Stock of the company shall be transferred only on the stock certificate book of the Company and shall be signed by the President and Treasurer and the Corporate seal shall

2.

be affixed thereto.

11.

Seal. The seal of the Company shall bear the corporate name of the Company with a suitable device and the words "Incorporated 1902".

12.

By-Laws. These By-Laws may be altered or amended by a two thirds vote of those present at any regular or special meeting of the Board of Directors.

Encl'd Address "Edison, New York"

*From the Laboratory
of
Thomas A. Edison.*

Subject _____

Orange, N.J. June 10th, 1902.

TO THE BOARD OF DIRECTORS OF THE MINING EXPLORATION COMPANY
of New Jersey,

Orange, N.J.

Dear Sirs:--

I am the owner of the following patents of the United
States and the Dominion of Canada.

United States Patents

#455,250 ✓

For a process for extracting
copper pyrites, dated December
15, 1901.

#564,423 ✓

For a process for separating
ores, dated July 21st, 1896.

Canadian patents-

43,588 ✓

For a process for treating
ores, dated July 12, 1893.

64,611 .

For an elevator and conveyor
dated October 27th, 1899.

65,594 -

For a method of apparatus for
reducing rock, etc., dated
Dec. 29th, 1899.

I have granted to the Edison Storage Battery Company,
a corporation of the State of New Jersey, a license under Canadian
patents #43588 and United States patents 564423 and 465250.

I offer to sell to you for use in United States and
Canada only, Canadian patents 43588 and United States patents
564423, subject to the said licenses to the Edison Storage Battery

Cable Address "Edison, New York."

*From the Laboratory
of
Thomas A. Edison.*

Subject: _____
#2.

Change, N.Y.

Company, and also to give you a non-assignable and exclusive license for nickel ores only, under Canadian patents 64611 and 65594. Also all rights in the United States and Canada for inventions and improvements on the devices described in these patents, for the benification of nickel ores only, which I may invent, during a period of five years from April 1st, 1902.

All expenses in connection with the explorations from April 1, 1902, having reference to this work and for the taking out of any future patents, to be borne by you.

The price at which I will sell the above, is the sum of \$250,000., being paid \$1,000. in cash and \$249,000. in full paid non-assessible stock of your Company.

If this offer is accepted, I would also agree to give a reasonable proportion of my time to this work during the said five years, in view of my many other interests and engagements.

Yours very truly,

Thomas A. Edison

Annual Report for 1902

OF THE

Mining Exploration Company

of New Jersey Company

organized under the Laws of the State of
New Jersey.

Directors, Officers, &c.

Filed 1900.

.....
Secretary of State.

Annual Report by a Domestic Corporation.

The Mining Exploration Company of New Jersey Company,
Organized and Registered under the Laws of the State of New Jersey.

The corporation above named, organized and registered under the Laws of the State of New Jersey, does hereby make the following report in compliance with the provisions of an act of the Legislature of New Jersey, entitled "An Act Concerning Corporations (Revision of 1896)," and the various acts amendatory thereof and supplemental thereto.

FIRST—The name of the corporation is Mining Exploration Company
of New Jersey

SECOND—The location of the registered office is at No. 765 Broad Street Street,
Newark, N.J., and John L. Nelson
is the agent upon whom process may be served.

THIRD—The character of the business is explore mines Mining + operate mining
railroads, roads, etc. etc.

FOURTH—The amount of the authorized capital stock is \$ 2,500,000.00 The amount actually
issued and outstanding is \$ 250,000

FIFTH—The names and addresses of all the Directors and Officers and the term when the office of each expires
are as follows:

NAMES OF DIRECTORS.	ADDRESS.	EXPIRATION OF TERM.
<u>William Nelson</u>	<u>New York, N.Y.</u>	
<u>John L. Nelson</u>	<u>Newark, N.J.</u>	
<u>Frederick C. Fischer</u>	<u>Newark, N.J.</u>	

OFFICERS:

President, William Nelson

Vice President,

2d Vice President,

Treasurer, Frederick C. Fischer

Secretary, John L. Nelson

SIXTH—The next annual meeting of the stockholders for election of Directors is appointed to be held on

first Tuesday in June 1905

SEVENTH—The name of the corporation has been at all times displayed at the entrance of its registered office in this State, and the corporation has kept at its registered office in this State a transfer-book, in which the transfers of stock are made, and a stock-book, containing the names and addresses of the stockholders and the number of shares held by them respectively, open at all times to the examination of the stockholders as required by law.

WITNESS our hands this 16th day of June A. D. 1905
William Nelson President,
John L. Nelson Secretary.

AN AGREEMENT made this day of June, 1902
between Thomas A. Edison of the township of West Orange in
County of Essex and State of New Jersey, hereinafter called
Edison; The Mining Exploration Company, a corporation organ-
ized under the laws of the State of New Jersey, hereinafter
called the Exploration Company; Charlss M. Schwab of the
City of New York; Edison Storage Battery Company a corpora-
tion of the State of New Jersey; James Gayley of the City of
New York; W.S. Pilling of the City of Philadelphia, in the
State of Pennsylvania; Theron I. Crane of the City of
Philadelphia, in the State of Pennsylvania; James Gaunt of
the town of Montclair in the County of Essex and State of
New Jersey and Walter S. Mallory of the City of East Orange
in the County of Essex and State of New Jersey, hereinafter
called the subscribers; and the Fidelity Trust Company a
corporation of the State of New Jersey, located at Newark
in the County of Essex and State of New Jersey, hereinafter
called the Trust Company.

WHEREAS the said Edison has for the last year
been exploring for nickel by means of the magnetic needle,
especially in the Sudbury District of Canada, and whereas
the Exploration Company has been formed with a capital of
two hundred and Fifty thousand dollars, (\$250,000.) to
carry on further exploration, and

WHEREAS the said Edison is the owner of all
the stock of the Exploration Company except four shares
held by the other directors of said corporation and has
entered into an agreement with the several subscribers of the
third part, to the end that part of the said stock so owned

by the said Edison shall be sold to the several subscribers and the proceeds thereof paid into the treasury of the Exploration Company and the said Edison, the Exploration Company and the several subscribers have agreed that the said Trust Company shall act as trustee in the matter for all the other parties, and

WHEREAS, the said Edison has transferred and delivered to the Trust Company certificates for twenty four hundred and ninety six shares of the stock of the Exploration Company to be held in trust for the benefits of himself, the Exploration Company and the said several subscribers:

NOW THEREFORE THIS AGREEMENT WITNESSES as follows:

1. The said stock of the Exploration Company is to be held in trust for the benefit of Edison and of the several subscribers and in the following proportions:

Thomas A. Edison	thirty two per cent.
Charles M. Schwab	twenty five per cent.
Edison Storage Battery Company	twenty per cent.
James Gayley	ten per cent.
Wm. S. Pilling	four per cent
Theron I. Crane	four per cent.
James Gaunt	three per cent.
Walter S. Mallory	two per cent.

2. The said shares of stock held by the trust Company shall be assigned and delivered by it to Edison and the several subscribers, as provided for by this agreement and as hereinafter may be directed by the directors of the Exploration Company.

3. Said stock to the amount of forty thousand dollars, par value, is agreed to be taken by Edison and the several subscribers in the proportion above set forth. Of this stock thirty per cent is to be delivered without consideration (other than already exists) to Edison; the balance including the said additional two per cent for Edison, is to be paid for at the par value of the stock; said money to be received by the Trust Company and paid into the treasury of the Exploration Company for its benefit; as called for by its direction, ten days notice of each call of this payment must, however, be sent by registered mail by the secretary of the Exploration Company to the post office address of Edison and of the several subscribers.

4. In case any of the subscribers shall neglect or refuse to take and pay for his proportion of said stock, within ten days after the receipt of such notice, as hereinbefore provided, the Trust Company shall, upon the direction of the board of directors of the Exploration Company, to be indicated by a resolution to that effect duly passed, sell the said proportion of stock to such person or persons and at such price as shall be determined by the said board, but the opportunity to purchase the same must first be given to the other subscribers pro rata according to the proportion subscribed for by each respectively.

5. The balance of said stock held by the Trust Company shall be held under a similar trust; that is to say: Whenever in the judgment of the board of directors of the Exploration Company, additional money is needed for the advancement of its business, they shall

declare the same by resolutions specifying the amount required, the number of shares of stock to be assigned and transferred by the Trust Company and the time and place when and where the same shall be paid for and delivered, and shall give to the Trust Company a copy of said resolution, and shall send to Edison and the several subscribers a notice thereof as aforesaid, and thereupon the Trust Company shall assign and deliver to Edison, thirty per cent of the said amount of stock so specified, without further consideration (other than already exists) and to Edison an additional two (2) per cent, and the several subscribers shall have the option within thirty days after receipt of the said notices, to take from, and pay for, to the Trust Company, at par value, their proportion of the said shares as hereinbefore set forth.

6. In case Edison and any of the subscribers shall not within said thirty days exercise said option, the Trust Company shall, upon the direction of the board of directors of the Exploration Company, to be indicated by a resolution to that effect duly passed, sell the said proportion of stock to such person or persons and at such price as shall be determined by said board, but the opportunity to purchase the same must first be given to the other subscribers pro rata according to the proportion subscribed for by each respectively. The said moneys so received are to be paid by the Trust Company into the treasury of the Exploration Company.

IN WITNESS WHEREOF, we have hereunto set our hands and seals in triplicate, the day and year first above written.

Signed, Sealed and delivered)
in the presence of)

J. R. Randolph

Oliver Price

Ed. 1125

A. H. Coole

H. J. Larouin

H. J. Larouin

St. Field

Ed. 1125

attest



Secretary

Thomas A. Edison 32%

Chas. Schuch 25%

Edison Storage Battery Co.

James Gayley 10%

W. S. Pilling 4%

T. O. Crane 4%

W. S. Pilling 4%

James Grant 3%

Thomas A. Edison
Mining Exploration Company
of New Jersey

By *[Signature]*
President

[JUNE, 1902]

Canada

43588

Assign remaining licenses
Belling Co for their use

42036 - license to use only

~~44894~~

64611

65594

US

564 423

465 250

} assign with
license to Belling Co
for their own use

Reserve rights Canada
for Belling Co

[JUNE, 1902]

Mr Edison has for the last year been exploring for nickel by means of the magnetic needle especially in the Sudbury Nickel District of Canada. A large number of ^{supposed} deposits have been found and patented ~~and for all~~ for the account of the Edison Storage Battery Co. Mr Edison believes that in the said Region there are numerous deposits of nickel ~~and~~ existing ~~which~~ cannot be discovered except by the dip needle & he has organized a Corps of 18 men to prospect during the coming year covering a territory within the nickel belt of about 225 square miles - and at an ~~the battery Co~~ expense which he estimates at in fact will limit to 25000 dollars.

As the battery Co is satisfied that it has already enough deposits to supply its wants ~~and~~ desires to

2.

limit its investment and therefore will not spend very much additional money but is willing to take a percent of any syndicate formed to furnish money for the Exploration about to be carried out.

Mr Edison thinks that in any syndicate formed he is entitled without payment of 30 percent of the Syndicate for which he will turn over his patents for Concentrated nickel already obtained in Canada & to be obtained within 4 years from date in Canada & also ~~the~~ ^{patents} to the whole affair without salary ~~that~~ After the Exploration is finished the deposits patented the syndicate can then

7.

decide what further expenditures
are to be made to prove up
the properties + selling and
operating the same -

~~after 25 and 26~~

Edison Receivers 30%	7,500
Edison Cash Subscription 10%	2,500
Edison Battery Co 20%	5,000
A. P. C. 10%	2,500
B. Smith 10%	2,500
C. Gentry 10%	2,500
D. Sweeney 10%	2,500
Σ	25,000

Mr. Edison has for the last year been exploring for nickel by means of the Magnetic needle, especially in the Sudbury Nickel District of Canada. A large number of supposed deposits have been found and patented, all for the account of the Edison Storage Battery Company. Mr. Edison believes that in the said region there are enormous deposits of nickel existing, which cannot be discovered except by the dip needle and he has organized a corps of 18 men to prospect during the coming year, covering a territory within the nickel belt, of about 225 square miles, at an expense which he estimates and in fact will limit to Twenty-five thousand dollars, (\$25,000.).

As the Battery Company is satisfied that it has already enough deposits to supply its wants and desires to limit its investment; therefore, will not expend very much additional money but is willing to take a percent of any Syndicate formed to furnish money for the exploration about to be carried out.

Mr. Edison thinks that in any Syndicate formed, he is entitled without payment to thirty (30) percent of the Syndicate for which he will turn over his patents for concentrating nickel already obtained in Canada and to be obtained within five (5) years from date in Canada, and also manage the whole affairs without salary. After the exploration is finished and the deposits patented, the Syndicate can then decide what further expenditures are to be made to prove up the properties and selling or operating the same.

Edison received 30% Proportion in Syndicate. \$10,714.30

Edison cash subscription	\$3,571.43	
Battery Company cash "	7,142.86	
A	3,571.43	
B	3,571.43	
C.	3,571.43	
D	3,571.43	
		25,000.00
		<u>\$35,714.30</u>

[JUNE, 1902]

Whereas Thomas A. Edison of Orange, in the State of New Jersey, U. S. A., Inventor, has applied to the department of Crown lands for a temporary lease and permission to explore for minerals only upon certain lands in the Sudbury District of Ontario, and in the event of the discovery of valuable minerals therein for the purchase or lease under the mines act and amendments thereto of such portions of said area as he may after such discovery select for the purpose of development, provided such exploration and application for permanent lease or purchase be made before the first day of December, nineteen hundred and two, and made within the time limited as hereinafter set forth, and

Whereas it will be an advantage to the province to encourage such exploration of minerals and the investment of capital, employment of labor and development of mineral resources which will result therefrom, and

Whereas the said Edison has already expended a considerable amount of money in the perfecting of Magnetic apparatus for and the training of experts for prospecting and has employed a number of experts with prospecting apparatus in the Sudbury District to familiarize them with their duties, and agrees by the acceptance of this temporary lease to employ such a number of experts as will be sufficient to make a complete magnetic survey of the territory leased or licensed to him during the period of such lease, and furnish a copy of all such Magnetic surveys to the Geological Survey for future use of the department.

Now therefore know all men by these presents that I the Hon.

Commissioner

of Crown lands for the province of Ontario, do in consideration of the premises and of this agreement aforesaid to comply with the conditions herein contained, hereby do lease to the said Edison for the purpose only of exploration, de-

1
velopment, equipment, and operation of mines from the date hereof until November 1902, of the following lands.

Dowling.

Lots 8, 9 10, 11, 12 and 13 in the Sixth Concession.

Lots 10, 11 and 12 in the Fifth Concession.

Drury.

Lot 1 South, 1/2 of lots 2 and 3, unpatented portion of lot 4, South half of lot 5, 7, 8 and 9 and lot 10 in the Sixth Concession. North half of lot 1 unpatented portion of lot 2, lot 4, South half of lot 5, unpatented part of lot 6, lots 7, 8 and 9 in the Fifth Concession.

Craigton

Lots 1 in the Third Concession. Lots 2, 3, 4, and 5 in the Second Concession. Unleased parts of lot 2 and lots 9 and 10 and 12 and South half of lot 11 in the first Concession.

Bleazard.

Lots 1 and 2 in the Fourth Concession. Lot 6 in the Third Concession. Unpatented part of lot 6 and lots 7, 8 and 9 in the Second Concession. Lot 1, unpatented parts of lots 2 and 3, South quarter of Lot 7, lots 8, 9, 10, 11 and 12 of the First Concession.

Graham.

Lots 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 in the Sixth Concession. North half of lot 3 and lots 4, 5 6, 7, 8, 9 and 11 in the Fifth Concession.

Dennison.

North half of lots 4 and 5 and lots 9, 10, 11 and 12 in the Sixth Concession. Lot 12 in the Fifth Concession.

Garson.

Lot 1 in the Fifth Concession, lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in the Fourth Concession. Lots 1, 2 and 10 and North half of lots 3, 4, 5, 6 and 7 in the Third Concession. Lots 8, 9 and 10 in the Second Concession. Lot 12 and Western half of lot 11 in the first Concession.

Falconbridge.

Lots 5, 6, 7, 8, 9, 10, 11, 12 in the Sixth Concession.
Unpatented portion of lots 6 and 7, lots 8, 9, 10, 11,
and 12 in the Fifth Concession. Unpatented portion of lot
7 and lots 9, 10, 11 and 12 in the Fourth Concession. Lots
8, 9, 10, 11 and 12 in the Third Concession.

Mac Lennan.

Lot 9 and the unpatented portion of lot 10, 11 and 12 in
the Third Concession. Lots 8, 9, 10 and 11 in the Second
Concession. Lots 7, 8, 9 and 10 First Concession.

Levack.

Lot 1 and 2 in the Fifth Concession. Southern half of lot 2
and Southern Quarter of lot 3 in the Fourth Concession. Lot
3 and the Southern half of lot 4 in the Third Concession.
Lot 5 and the Southern half of lot 6 and lot 9 and 10 in
the Second Concession. Lots 6, 7, 8, 11, and 12 and the
Southern half of lots 9 and 10 in the First Concession.

Morgan.

So much of lot 1 not leased and lots 2 and 3 in the Sixth
Concession. Lots 2, 3, 4, and 5 in the Fifth Concession. Lots
5, 6, 7 and 8 in Fourth Concession. Lots 7, 8, 9, 10 and 11
in the Third Concession.

Trill.

Lots 7, 8, 9, and 10 in the Sixth Concession. Lots 7, 8, 9,
10 and 11 in the Fifth Concession. Lots 7, 8, 9 and 12 in
the Fourth Concession. Lots 7, 8, 9 and 12 in the Third
Concession. South half of lots 6 and 7 and lots 8, 9, 10,
11 and 12 in the Second Concession. The unleased portion of
lot 7 and lots 10, 11 and 12 in the First Concession.

Cascaden.

Lot 3 and 4 in the Fourth Concession. Lots 3, 4, 5 and 6 in
the Third Concession. Lots 4, 5, 6 and 7 in the Second Con-
cession. Lots 6 and 7 and the unleased part of lot 8 in the
First Concession.

McKim.

Eastern half Lot 3 and unpatented part of Lot 7 in the Sixth
Concession.

Snider.

Lot 2 in the Sixth Concession. Lots 3, 4, 5, 6 and 7 in Fifth Concession. Unleased portions of lots 3 and 4, North Half of lot 6, lot 7 and Westerly three quarters of lot 8 in the Fourth Concession. Lot 3 and 4, the unpatented part of lot 5, South half of lot 6, free portions of lots 7, 8 and 9 and lot 10 in the Third Concession. Lot 4 and 7 in the Second Concession. Lots 6 and 7 in the first Concession.

The said Edison agrees to put atleast twenty four men exploring on these lands during the whole term of the lease and to expend any sum necessary for a complete Magnetic exploration survey of the lands herein leased, and will after each parcel or lot in each concession has been explored and surveyed, will in the event of valuable minerals being found thereon, according to the mining law apply for a permanent lease, but if no valuable minerals are found, he, the said Edison will at once on the completion of the survey of each and every lot notify the Crown land office that he does not desire a permanent lease of the same, that it may be taken out of the operation of this lease. The said Edison shall not interfere with or disturb any existing right or interest which any person may have already acquired within the said area, whether in respect to land or timber or any other matter, and the rights of the holder of timber license, covering any part of the said area are hereby especially reserved here from and declared to be unimpaired or anything contained therein, and the Crown shall be at liberty to grant timber licenses or permits on any part of said area not now under license or otherwise to deal with the timber thereon as may seem proper. The period of this lease shall be from the 30th day of June 1902 and expire on the 30th of November 1902.

In witness whereof I have hereunto set my hand and seal at Toronto, this day of June 1902.

Signed, Sealed and Deliv- :
::
ored in the presence of. ::

Commissioner of Crown Land.

AGREEMENT

BETWEEN

THOMAS A. EDISON

AND

MINING EXPLORATION COMPANY
OF NEW JERSEY

DATED JULY 2, 1902.

AN AGREEMENT made this second day of July, Nineteen
Hundred and Two, between -

THOMAS A. EDISON

of the township of West Orange, in the county of Essex
and state of New Jersey, of the first part, and -

MINING EXPLORATION COMPANY OF NEW JERSEY

a corporation duly organized under the laws of the state of
New Jersey, of the second part.

WHEREAS the said party of the first part has by
proper instruments in writing, assigned and transferred
to the said party of the second part, letters patent of the
Dominion of Canada Number 43,989, and letters patent of the
United States Number 564,423, subject to licenses thereto-
fore granted to the Edison Storage Battery Company, a cor-
poration organized under the laws of the state of New Jersey;
and has also granted a non-assignable and non-exclusive li-
cense to the said party of the second part under letters
patent of the Dominion of Canada Numbers 64611 and 65594 re-
spectively.

NOW, THEREFORE, this agreement witnesses, that the
party of the first part hereby assigns all rights in the
United States and the Dominion of Canada, for any invention
and improvements on the devices described in those patents
which the party of the first part may invent during the

period of five years from the first day of April, Nineteen Hundred and Two, and also agrees to give a reasonable proportion of his time to work on these inventions during the said period of five years in view of his many other interests and engagements.

And the said party of the second part on its part agrees to pay all expenses incurred by the party of the first part in connection with the exploration work in connection with the matters involved in the said patents and the purposes for which the party of the second part was organized since the first day of April, Nineteen Hundred and Two, and from the present time up to the expiration of the said five years; and also will pay all expenses of taking out any patents for the said inventions and improvements above referred to.

IN WITNESS WHEREOF the said party of the first part has hereunto set his hand and seal and the said party of the second part has caused these presents to be signed by its president and its corporate seal attached the day and year first above mentioned.

Signed, sealed and delivered:
: in the presence of :

Thomas A. Edison

Witness

Secretary

*Mining Exploration Company
of New Jersey
By *W. H. [Signature]*
President*

Special Meeting of the Board of Directors of the Mining Exploration Company of New Jersey held this second day of July, 1902 at ten o'clock in the forenoon at the ^{the corporation} ~~office of Howard~~ ^{office of} ~~Howard~~ ^{president} ~~Howard~~, No. 765 Broad Street, Newark, New Jersey pursuant to notice.

Present:

William Pelzer

John E. Helm

Frederick C. Fischer

The meeting was called to order by the president. The secretary reported that Mr. Thomas A. Edison had executed and delivered the assignments and licenses, and a contract in pursuance of the terms of his offer of June 10th, 1902, and that the forms of the papers had been submitted to counsel for the company and had been approved. Thereupon it was moved and seconded that the officers of the Company issue to Mr. Edison full-paid, non-assessable stock of the Company of the par value of Two hundred and forty nine thousand dollars, and paid to him the sum of One thousand dollars.

Motion carried.

Mr. Pelzer tendered his resignation as president and director of the company to take effect at the adjournment of this meeting. On motion his resignation was accepted.

Moved and seconded that the Board proceed to the election of a director to fill the vacancy caused by the resignation of Mr. Pelzer.

Motion carried.

The Board then proceeded to the election of a director to fill the vacancy, and Thomas A. Edison was duly elected.

Moved and seconded that the meeting proceed to the election of a president to fill the vacancy caused by the resignation of Mr. Pelzer.

Motion carried.

The meeting then proceeded to the election of a president to fill the vacancy in that office and Mr. Thomas A. Edison was unanimously elected. *President.*

Mr. John E. Helm tendered his resignation as secretary and director of the company to take effect at the adjournment of this meeting. On motion his resignation was accepted.

Moved and seconded that the Board proceed to the election of a director to fill the vacancy caused by the resignation of Mr. Helm.

Motion carried.

The Board then proceeded to the election of a director to fill the vacancy, and ^{Edward} John F. Randolph was duly elected.

Moved and seconded that the meeting proceed to the election of a secretary to fill the vacancy caused by the resignation of Mr. Helm.

Motion carried.

The meeting then proceeded to the election of a secretary to fill the vacancy in that office and Mr. John F. Randolph was unanimously elected *Secretary.*

Mr. Frederick C. Fischer tendered his resignation as treasurer and director of the company to take effect at the adjournment of this meeting. On motion his resignation was accepted.

Moved and seconded that the Board proceed to the election of a director to fill the vacancy caused by the resignation of Mr. Fischer.

Motion carried.

The Board then proceeded to the election of a director to fill the vacancy, and Theron I. Crane was duly elected.

Moved and seconded that the meeting proceed to the election of a treasurer to fill the vacancy caused by the resignation of Mr. Fischer.

Motion carried.

The meeting then proceed to the election of a treasurer to fill the vacancy in that office and Mr. John F. Randolph was unanimously elected ~~Treasurer~~.

Moved and seconded that the meeting proceed to the election of two directors to fill the vacancies existing in the Board.

Motion carried.

The meeting then proceeded to the election of two directors to fill the vacancies existing in the Board, and Walter S. Mallory and James Gayley were unanimously elected directors.

Moved and seconded that the principal office of the corporation in the State of New Jersey be located at the corner of Valley Road and Lakeside Avenue, in the Township of West Orange, in the County of Essex, and that John F. Randolph be the agent in charge upon whom process and other papers may be served.

On motion the meeting then adjourned to meet at the call of the president.

Secretary.

CERTIFICATE OF PAYMENT OF CAPITAL STOCK.

of the Mining Exploration Company of New Jersey. The location of the principal office in this state is at the corner of Lakeside Avenue and Valley Road in the Township of West Orange in the County of Essex.

The name of the agent therein and in charge thereof upon whom process against this corporation may be served is John F. Randolph.

In accordance with the provisions of "An act concerning corporations (Revision of 1896)," we, William Pelzer President, and John E. Helm Secretary of the Mining Exploration Company of New Jersey a corporation of the State of New Jersey, do hereby certify that Two hundred and fifty thousand dollars, being the total amount of capital stock of said company as authorized by its Certificate of Incorporation filed in the Department of State, on the second day of May A. D. 1902, has been fully paid in; Two hundred and forty nine thousand dollars thereof by the purchase of property and One thousand dollars thereof in cash.

WITNESS our hands the *second* day of July
A. D. 1902

Wm Pelzer
-----President

John E. Helm
-----Secretary.

State of New Jersey :
: ss
County of Essex :

William Pelzer President, and John E. Helm Secretary of the Mining Exploration Company of New Jersey, being severally duly sworn, on their respective oaths depose and say that the foregoing certificate by them signed is true.

Subscribed and sworn to
Before me this *second*
day of *July* A. D. 1902

Frank C. Fischer
Notary Public J. N. D.

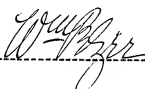
This is to certify that at a special meeting of the Board of Directors of the Mining Exploration Company of New Jersey held this 2nd day of July 1902, at ten o'clock in the forenoon at the then principal office of the corporation, No. 785 Broad Street, Newark, New Jersey, pursuant to notice. The following resolution was adopted by the votes of all the members of said Board.

"RESOLVED that the principal office of the corporation in the State of New Jersey be located at the corner of Valley Road and Lakeside Avenue, in the Township of West Orange in the County of Essex, and that John F. Randolph be the agent in charge upon sales process and other papers may be served."

The location of the principal office in this State is at the corner of Valley Road and Lakeside Avenue, in the Township of West Orange, in the County of Essex.

The name of the agent therein and in charge thereof upon whom process against this corporation may be served is John F. Randolph.

IN WITNESS WHEREOF the said Mining Exploration Company of New Jersey has caused this certificate to be signed by its president and secretary, and sealed with its corporate seal this 2nd day of July A. D. 1902.


-----President


-----Secretary.

THOS. A. BISHOP,
President.

W. S. HALLORY,
Vice-President.

J. R. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Telephone Call 311 Orange.

Orange, N. J., May 7, 1903.

Thomas A. Edison, Esq.,
Orange,
New Jersey.

Dear Sir:

A special meeting of the Board of Directors of this company will be held at the Edison Laboratory on Monday May 11, 1903 at three o'clock P. M., for the purpose of making assessment upon the subscribers for stock in this company and such other business as shall properly come before the meeting.

Yours truly,

J. R. Randolph

Secretary.

5/12/03/WSK/L

Mr. Randolph:--

The following is a memorandum of the meeting yesterday, of the Mining Exploration Company of New Jersey:

First, the Minutes of previous meeting were held and approved, then statement was made by the President as to the condition of the work and after very considerable discussion, it was decided to accept the offer made by Mr. James Gayley, to furnish the Company a diamond drill outfit free of cost, the Company agreeing to pay the wages of the operators and all expenses in connection with the drilling. It was also decided to duplicate the surveying gang of last year as to numbers and at the same time, go ahead with the drilling. A resolution was also offered by Mr. Gaunt and seconded by Mr. Crane as to the call, as follows:

"Resolved that a call for the balance of the \$28,000. (50%) be made upon the subscribers for stock in this Company, payable on or before May 21st, 1903 and that checks be made payable to the order of the Fidelity Trust Company of Newark, N.J. and the Secretary be expected to notify the subscribers of the call.

In writing the letter, will you kindly bring out the fact as to the diamond drill and the exploring work to be done this Summer.

Yours very truly,

W.S. Mallory, V.P.

5/12/03/WSM/L

At a special meeting of the Board of Directors held on Monday, May 11th, 1903, it was decided to make a call of the balance of 50% upon the subscribers of this Company, payable on or before May 21st, to cover the expenses of men now in the field and those which will be put there as soon as weather permits.

In addition to the work of explorations, we have also arranged for diamond drill explorations.

Kindly send the amount of your subscription -----
to the Fidelity Trust Company, Prudential Building, Newark, N.J.,
making check payable to their order, and they will forward stock
for same.

Trial Balance Mining Exploration Co. of B.C.

October 1 - 1903

190876	Cash			
184773	Exploration	Comm.		
1593808		Canada		
755223	Outfit	%		
9779	General Expense			
12500	Western Exploration			
61980	Applying Area			
219299	J. V. Miller			
396859	Lease	Ac		
	Pro A Edison		490502	
	Wm Pa Croy Mho		222934	
2400	Insurance	Ac		
	Capital Stock		25000000	
17500	Johnson Mine Property			
35177	Legal Expense			
1240000	Patent	Ac		
20960000	Mining Stock			
33265	Edison Storage Battery Co.			
25713436			25713436	

Liabilities

Pro A. Edison	\$ 490502
Wm Pa Croy Mho	222934
	\$ 713436

Cash & Assets Account

Cash in Bank	190876	
J. V. Miller	219299	
Edison Storage Battery Co.	33265	443440
Liabilities and Cash & Assets Account		\$ 269996

Mr. Lamm (V)
Mr. Crane Minutes-

~~Report of~~

The Treasurer present a Trial
Balance to Oct 1, 1903 which
was read to the meeting.

Present T.A.E. T.C. James Es.
kr S. M.

~~Call~~ Call made for \$20,000.

Motion made by Mr. Crane
Seconded by Mr. Lamm

no more land to be engaged for
Certificate of statement-

Gaunt & Janvier
New York

New York, October 30th, 1903.

W. S. Mallory, Esq.,
Orange, N. J.

Dear Mr. Mallory:

~~If I wanted to make a resolution indefinite I should offer such a one as your draft. As I understand it we wished the stockholders to be intelligently informed and I think the following does in form -~~

In order that ~~during the winter months~~ drilling may be continued in Canada; and to take up land under lease, ~~under subscription~~ and applied for; and to settle indebtedness outstanding against the company, as shown by statement submitted, it is

RESOLVED that Twenty Thousand (\$20,000.) Dollars additional stock be issued, at par, in accordance with the terms of the agreement dated June 28th, 1902 as set forth in sections five and six; and a statement be issued for the information of subscribers, showing in detail receipts and disbursements to November 1st, 1903; also what land is held under lease, ~~applied and~~ applied for, and what will be the probable cost of continuing the work of drilling in Canada ~~during the winter months.~~

FURTHER, when such statement is submitted the stock holders shall be asked to notify the company within 30 days from the date of statement whether they wish to avail themselves of the privilege of subscribing in full or part for the stock to which they are entitled.

Payment to the Fidelity Trust Company of Newark, N. J., as provided in the original agreement may be made either in full or part within 30 days of If the subscribers wish they may at their option pay one third of the subscription with 30 days from . . . the second third within 60 days of the first payment, and the final third within 60 days after the date of the second payment. Privilege of cancelling is allowed on any one of the part payments if notice be given 30 days before calls are due. Any stock not taken by the subscriber is to be sold in accordance with the terms of section six of the agreement of June 28th, 1902.

Yours truly,



[ATTACHMENT]

COPIES OF RESOLUTIONS PASSED AT DIRECTORS MEETING, OCT. 27, 1903.

In order that drilling may be continued in Canada, and to take up the land under lease, and applied for; and to settle indebtedness outstanding against the Company, as shown by statement submitted, it is

RESOLVED that Twenty Thousand (20,000) Dollars additional stock be issued at par in accordance with the terms of the agreement dated June 28th, 1902 as set forth in sections five and six; and a statement be issued for the information of subscribers, showing in detail receipts and disbursements to November 1st, 1903; also what land is held under lease, applied for, and what will be the probable cost per month of continuing the work of drilling in Canada.

FURTHER, when such statement is submitted, the Stockholders shall be asked to notify the Company within thirty days from the date of statement whether they wish to avail themselves of the privilege of subscribing in full or part for the stock to which they are entitled.

Payment to the Fidelity Trust Company of Newark, N. J., as made provided in the original agreement may be either in full or part within thirty days of November 9th. If the subscribers wish, they may at their option pay one-third of the subscription within thirty days from November 9th, the second third within sixty days of the first payment, and the final third within sixty days after the date of the second payment. Privilege of cancelling is allowed on any one of the part payments if notice be given thirty days before calls are due. Any stock not taken by the subscriber is to be sold in accordance with the terms of section six of the agreement of June 28th 1902.

It is the sense of the Board of Directors that no more land be acquired, except that for which negotiations are under way at present until the diamond drill work has proved up some of the properties now controlled by this Company.

[IDENTICAL LETTERS SENT TO MINING EXPLORATION
COMPANY OF NEW JERSEY STOCKHOLDERS]

THOMAS A. EDISON,
President,

W. S. MALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company
of New Jersey.

Telephone Call 311 Orange.

Orange, N. J., Nov. 9th, 1903.

Thomas A. Edison, Esq.,
Orange,

N.J.

Dear Sir:--

We beg herewith to enclose a copy of a letter from Mr. Edison, having blue-prints attached, which explains itself, also copy of resolutions adopted at Director's meeting, October 27th, 1903, copy of trial balance of October 1st, 1903, (reports on October work not yet received from Canada) and statement showing condition of the work, property acquired and probable expenditures per month from this date.

Will you please notify us on or before December 9th, 1903, whether you wish to avail yourself of the privilege of subscribing, in full or part, for the stock under the terms as set forth in the copy of the resolution enclosed. Under the terms of the original agreement, you have the right to subscribe for 4 shares on this call amounting to \$400.

We have arranged with Mr. Edison to accept and pay for all stock under this call which is not accepted and paid for by the subscribers, first giving the subscribers who do pay for their stock the chance to prorate with him.

Yours very truly,

W. S. Mallory

V.P.

Enclosures.

[ATTACHMENT]

LABORATORY OF THOMAS A. EDISON.

Orange, N. J., November 9th, 1903.

Mining Exploration Co.,

Orange, N. J.

Dear Sirs:-

Please communicate with the Subscribers to your Company and state the following, and ascertain if they want to gamble any further on trying to locate the body of something which the needle shows must exist in large quantities in the Elizabard section at Sudbury, Canada. I am perfectly willing to go on as I am now more convinced than ever that we are near a gigantic deposit of nickel, and if so we have the Mother line of deposits. My reasons are as follows:

1st. The per cent of magnetic iron in the Diorite is never more than $\frac{3}{4}$ of one per cent, and this exists in the Diorite everywhere in this district, and even where there is no attraction. In New Jersey, the gneiss rock that is all over the Highlands contains never less than 2 per cent and is known to be over 10,000 feet deep and it gives no attraction. The assay for iron in drill cores all the way down shows rock is of same character, i.e. Diorite with from $\frac{1}{2}$ to $\frac{3}{4}$ of one per cent of Magnetite.

2nd. GEOLOGY. The Diorite is exposed in a circle all the way around a patch of Cambrian slate (see Sketch 1) and all the Nickel deposits occur on the outer rim of the Diorite on the foot wall side for over 100 miles. All the Geologists agree that the Nickel deposits are on the foot wall next to the granite and never on the hanging wall, and all on the outer edge of the outcrop (see Sketch #2). As all our big attractions are several thousand feet away from the juncture or outcrop, and as the Diorite has a basin like character, it pitches gently towards the Cambrian slates:

[ATTACHMENT]

#2

Now if the Nickel is all on the foot wall, and we find these attractions back from the outcrop and the Diorite pitches slightly down, then the drill would not encounter it before it went to a considerable depth, just as the Rand Mines in the Transvaal find the ore deeper as it recedes from the outcrop, that also being a basin like Sudbury Diorite.

On hole #3 we thought the drill had reached the granite foot wall at a depth of 895 feet. Our engineer took a piece of the granite core from bottom of the hole to the Chief of the Bureau of Geology, and he reports that it is not the foot wall granite, but a piece from a larger outcropping nearby, and advised that we drill through to the foot wall.

The indications are that holes about 1000 feet will be sufficient to locate the deposit if it exists.

It is difficult to calculate the position of the body of ore by the lines of attraction on the surface, as the lines bend as they recede from the magnetic body; if the deposit was symmetrical as to ore body, and also as to the magnetic lines of the earth, we could probably calculate the position, but the directions of the body is such that this is impossible.

I advise that we finish hole #3 and put down hole #4 until it reaches the foot wall.

Yours very truly,

THOS. A. EDISON

[ATTACHMENT]

STATEMENT OF WORK TO NOVEMBER 1, 1903.

1968 acres have been leased from the Government in the Sudbury district, Ontario, and first payments made.

In addition, 1560 acres have been applied for, but leases are withheld on account of timber restrictions. When these leases are issued, it will be necessary to pay the first installment of \$1.00 per acre.

In addition, 5429 acres have been applied for but no action has as yet been taken on the applications by the government Land department. If the leases are issued it will be necessary to make first payment of \$1.00 per acre on each lease when issued, provided we decide to accept them, which will depend largely upon results of the drilling now being done.

DIAMOND DRILLING.

While we have a large number of deposits which we are almost certain contain more or less nickel, it was thought best to do the drilling on one of the large deposits, as everything from the surface readings indicate a very large body of something, which we believe to be nickel, so drilling work was started in Hleazard district. Drill hole #1 was put down to a depth of 300 feet, then as no nickel was found, it was decided to start a second hole in another location.

Drill hole #2 was then put down to a depth of 259 feet and nothing being found, after consultation with Government experts, it was decided to move drill to another location and start a new hole.

Drill hole #3 was put down to a depth of 896 feet and stopped because the drill went into granite. Our Engineer took samples to the government expert, who through the character of the rock, indicated a patch of granite and who advised that we drill through it, which we have decided to do, with the extra drill, for which we have just arranged.

Drill hole #4 is now being put down and is approximately

[ATTACHMENT]

(2)

450 feet deep. It will probably have to go to a depth of about 1000 feet before the granite will be reached. The core from this hole seems to be more mineralized than that from the other, which is a good sign, the rock showing one tenth of one per cent nickel and the concentrate about eight per cent nickel.

ESTIMATE MONTHLY EXPENSES.

To hurry the work it has been decided to operate two diamond drills.

Pay Roll- Company's man at each drill and our engineer	\$ 330.00
Company's Drill- 400 feet per month a \$3.00 per foot	1200.00
Contract Drill - 400 feet per month a \$3.15 per foot	1260.00
Supplies and sundries	<u>300.00</u>
Estimated cost per month	\$3090.00

Rentals due on leased property (1998 acres)	
Rentals due January 1st, 1904	245.30
Rentals due April 1st, 1904	<u>129.13</u>
	\$ 374.43

NOTION MADE BY MR. CRANE,

Seconded by Mr. Gaunt:

It is the sense of the Board of Directors that no more land be acquired, except that for which negotiations are under way at present, until the diamond drill work has proved up some of the properties now controlled by this Company.

Carried.

502
of
m

List of Stockholders of Mining Exploration
Company of New Jersey, December 28 1910.

NAME	NUMBER OF SHARES.
✓ Thomas A. Edison	2224 Orange N.Y.
✓ W. S. Mallory	5 Newark, N.J.
✓ T. I. Crane	17 } Real Estate Trust
W. S. Pilling	16 } Co. Phila. Pa.
Jas. Gayley	41 - 71 Broadway N.Y.
Jas. Gaunt	13 367 Canal St. N.Y.
Thos. T. Gaunt	4 - 547. S. 4th N.Y.
C. M. Schwab	100 - 111 Bway N.Y.
Edison Storage Battery Co.	80 Orange N.Y.
	2500

Crane
Gayley
Pilling
T. I. Crane
Schwab
Gaunt
Mallory

[PHOTOCOPY]

Mining Exploration Co. of New Jersey

Cash Receipts

From	This Company received the following cash	
	N. S. Mallory for Stock	800.00
	Jas. Gannett " "	1200.00
	Ch. M. Schwab " "	10,000.00
	Edison Storage Battery Co.	8,000.00
	N. S. Pittling " "	1,600.00
	J. J. Crane " "	1,600.00
	Jas. Bayley " "	4,000.00
	Thos. A. Edison " "	800.00
	2632.92	2632.92
	" for prospecting etc	2632.92
		48,724.98

Cash Disbursements

Exploration in Conn.	1847.73	✓	51,182.90
Sudbury	26,643.07	✓	
Outfit	125.00	✓	
General Expenses	213.57	✓	
Taxes	3979.82	✓	
Analyzing Ores	615.04	✓	
Larock Route	5124.59	✓	
J. V. Miller	35.12	✓	
Insurance	51.00	✓	
Johnson Mine Property	792.24	✓	
Legal Expenses	1253.36	✓	
Edison Storage Battery Co.	3066.68	✓	
Cash in Bank	10876	✓	51,182.90
	48,724.98		51,182.90

Subscribed by
as of Jan. 31, 1917

This statement is
as of Jan. 31, 1916
Wm. H. Miller, Secy.

*Transferred with CE
May 1912
CE to make up
with 700 shares
CE (with company
and 100) and to
advance their to
making for personal
of the CE of the
the CE and paying 7
M.*

Mr. Charles Edison:-

RE MINING EXPLORATION COMPANY OF NEW JERSEY

A digest of the history of this company, as far as the records show it, is attached hereto.

I do not think there is any doubt but that the subscribers mentioned in the trust agreement of June 28, 1902 still have all their rights under the agreement, and the Fidelity Trust Company will certainly not give up the stock which it holds in trust, except upon the authorization of these subscribers. The subscribers outside of the immediate Edison interests are as follows:- Charles M. Schwab, James Gayley, W. S. Pilling, Theron I. Crane and the Estate of James Gaunt. Messrs. Schwab and Gayley are both very wealthy men, and Mr. Edison would probably have little difficulty in buying their interests. The interests of Pilling, Crane and Gaunt's Estate amount to only 11%.

Apparently, the title which Mr. Edison has in the Canadian mining lands is held for the benefit of the Company, inasmuch as the Company's money was used as far as it would go for exploration, etc. in connection with said lands, and Mr. Edison's further expenditures were charged against the Company. Mr. Edison, of course, has a claim against the Company to be reimbursed for expenditures made by him. As a legal proposition, however, part of this and probably a considerable part would be barred by

*Ores &
K. J. more 15*

September 27, 1917.

the Statute of Limitations, that is, assuming that Mr. Edison has not received any notes or other evidences of indebtedness to such a character as not to be so barred. The Statute bars claims of the character that Mr. Edison's claim seems to be which have accrued more than six years prior to the bringing of suit to recover the same.

Apparently the best way to handle the matter to accomplish the result you desire is to negotiate with Messrs. Schwab, Gayley, Filling, Crane, and the executors of the Count Estate for the purchase of their stock and their rights under the agreement, pointing out in such negotiations that the corporation owes Mr. Edison \$23,182.90. As a beginning, it might be well to try to obtain options.

If Mr. Edison should succeed in acquiring practically all the stock in this manner, he could then sell a portion of the stock to Mr. Ford and he and Mr. Ford could lend the Company the money necessary to develop the property.

Of course, in making any offer for the interests of the subscribers, Mr. Edison, as a director and an officer of the corporation, would have to be entirely frank in his statement regarding the probable and possible value of the property.

I do not see how we can very well restore the stock to its original par value, because this would only be justifiable in the event that the Company's assets were worth \$250,000. Further-

-3-

more, this would require stockholders' action, and would therefore mean dealing with the stockholders. In any stockholders' action to be taken, it must be remembered that over 80% of the stock is in the hands of the trustee. While the Company's books at present show this stock in Mr. Edison's name, I do not think he would have the right to vote it except by consent of all of the subscribers.

Henry Lanahan

HL-JS

[ENCLOSURE]

September 26, 1917

MINING EXPLORATION COMPANY OF NEW JERSEY

Incorporated May 2, 1902.

Authorized capital stock, 2500 shares of the par value of \$100 each, \$250,000.

Principal office, 765 Broad Street, Newark, N. J., later changed to corner of Valley Rd. and Lakeside Avenue, West Orange, N. J.

Statutory agent, John E. Helm, later changed to John F. Randolph.

Ten shares of stock issued to incorporators, as follows:

William Felzer	4
John E. Helm	3
Fred'k C. Fisher	3

June 16, 1902 - Mr. Edison sells certain patent rights to the corporation for \$250,000, \$1000 cash and \$249,000 in stock, under the following patents:

U. S. No. 465,220	- expired
U. S. No. 564,425	- expired
Canadian No. 43588	- dropped
Canadian No. 64611	- dropped
Canadian No. 65594	- expires Dec. 29, 1917

June 28, 1902 - agreement between Thomas A. Edison, Mining Exploration Company of New Jersey, and the following subscribers:

Charles M. Schwab
Edison Storage Battery Company
James Gayley
W. S. Pilling
Theron I. Crane
James Gaunt
Walter S. Mallory

[ENCLOSURE]

-2-

Mr. Edison transfers 24,096 shares of stock of the corporation to Fidelity Trust Company to be held in trust for the benefit of himself, the Exploration Company, and several subscribers, in the following proportions:

Thomas A. Edison	32%
Charles M. Schwab	25%
Edison Storage Battery Co.	20%
James Gayley	10%
W. S. Pilling	4%
Theron I. Crane	4%
James Gannt	3%
Walter S. Mallory	2%

Sections 3 and 4 of the agreement of June 28, 1902 provide that stock to the amount of \$40,000 par value is to be taken by Mr. Edison and several subscribers in the above proportions, 30% to be delivered to Mr. Edison without charge, the remaining 2% and the shares taken by other subscribers to be paid for at par.

This was carried out in accordance with directors meetings of July 28, 1902 and May 11, 1903.

Sections 5 and 6 of the agreement read as follows:-

5. The balance of said stock held by the Trust Company shall be held under a similar trust; that is to say: Whenever in the judgment of the board of directors of the Exploration Company, additional money is needed for the advancement of its business, they shall declare the same by resolutions specifying the amount required, the number of shares of stock to be assigned and transferred by the Trust Company and the time and place when and where the same shall be paid for and delivered, and shall give to the Trust Company a copy of said resolution, and shall send to Edison and the several subscribers a notice thereof as aforesaid, and thereupon the Trust Company shall assign and deliver to Edison, thirty per cent of the said amount of stock so specified, without further consideration (other than already exists) and to Edison an additional two

[ENCLOSURE]

-3-

(2) per cent, and the several subscribers shall have the option within thirty days after receipt of the said notices, to take from, and pay for, to the Trust Company, at par value, their proportion of the said shares as hereinbefore set forth.

6. In case Edison and any of the subscribers shall not within said thirty days exercise said option, the Trust Company shall, upon the direction of the board of directors of the Exploration Company, to be indicated by a resolution to that effect duly passed, sell the said proportion of stock to such person or persons and at such price as shall be determined by said board, but the opportunity to purchase the same must first be given to the other subscribers pro rata according to the proportion subscribed for by each respectively. The said moneys so received are to be paid by the Trust Company into the treasury of the Exploration Company.

The directors meeting of October 27, 1905 authorized a call of \$20,000 worth of stock under Sections 5 and 6. Apparently, this was not carried out. Perhaps Mr. Mallory can explain why not. At the time of this meeting, Mr. J. F. Randolph was Secretary, and the minutes of the meeting are not signed. Mr. Randolph died in February, 1908.

Directors meeting held December 15, 1910 and stockholders meeting held December 28, 1910 provided for the reduction of the par value of capital stock from \$100 to \$2.00 per share, which was carried out.

The officers of the company are as follows:-

Thomas A. Edison	- Director, President
Harry F. Miller	- Director, Secretary, Treasurer
Walter S. Mallory	- Director, Vice President
James Gayley	- Director

The office of the fifth director is vacant on account of the death of Mr. James Gaunt.

[ENCLOSURE]

-4-

The present distribution of the stock is as follows:-

Stock standing on the Company's books in the name of Mr. Edison, held in trust under agreement of June 28, 1902 by Fidelity Trust Co., and assigned in blank by Mr. Edison-----	Shares 2096
Thomas A. Edison-----	144
Charles M. Schwab-----	100
Edison Storage Battery Company-----	80
James Gayley-----	41
Theron I. Crane-----	16
W. S. Filling-----	16
Walter S. Mallory-----	5
James Gaunt-----	1
Harry F. Miller-----	1

Certificates 5, 6 and 10 for one share each in the names of Messrs. Mallory, Gayley and Gaunt, respectively, are still in the stock book. These are apparently directors' shares, but they are not assigned in blank.

James Gaunt died December 3, 1916. Dr. T. F. Gaunt, 53 West 50th Street, New York, is one of his executors.

The address of James Gayley is 71 Broadway, New York.

Apparently each of the parties named as a subscriber in the trust agreement of June 28, 1902 still has rights by virtue of the agreement, and in any reorganization of the Company, the rights of these parties will have to be taken care of.

[ENCLOSURE]

-5-

Mr. H. P. Miller's statement of the receipts and disbursements of the corporation is as follows:-

Receipts

The following payments for stock were received:

W. S. Mallory-----	\$ 800.00
James Gaunt-----	1,200.00
Charles H. Schwab-----	10,000.00
Edison Storage Battery Co.-----	8,000.00
W. S. Pilling-----	1,600.00
T. I. Crane-----	1,600.00
James Gayley-----	4,000.00
Thos. A. Edison-----	800.00
	<u>\$28,000.00</u>

Received from Thomas A. Edison to pay for prospecting, taxes, etc.-----	\$23,182.90
	<u>\$51,182.90</u>

Disbursements

Exploration in Sudbury-----	\$26,643.07
" " Connection-----	1,847.73
" " West-----	125.00
Outfit-----	9,117.22
Lease and rentals-----	5,124.59
Taxes-----	3,979.82
Legal Expenses-----	1,255.26
Edison Storage Battery Company-----	2,056.66
General Expenses-----	213.51
Analysing ores-----	615.04
Insurance-----	51.00
J. V. Miller-----	55.12
Cash in Bank-----	106.76
	<u>\$51,182.90</u>

[ENCLOSURE]

-6-

As I understand the situation, certain crown leases of mining lands in Canada were taken out in the names of Mr. Edison and other individuals, all of which leases have expired, except five tracts, title to which now stands in the name of Mr. Edison as evidenced by certain certificates of ownership.

The Secretary of State of New Jersey advises us that as far as his records show, the corporation is still in existence and in good standing.

1918

D.M.C.D.

State of New Jersey
State Board of Taxes and Assessment

TRENTON,

Report of the

Mining Exploration Company of New Jersey
West Orange, N.J.

This Report must show Existing Conditions January 1st, 1918. All of the following questions MUST be answered, and wherever the proper answer is "None" or "Nothing," it should be so stated. Failure to make this Report will cause the Assessment to be made on the Full Authorized Capital Stock.

To effect a decrease of capital stock (whether authorized or issued capital stock), the procedure provided for under Section 29 of the General Corporation Act must be followed. Stock once issued is and remains outstanding until retired and cancelled in the manner provided by law for the retirement and cancellation of capital stock.

THOS. A. EDISON Date of incorporation MAY 1 - 1902
President.
H. F. MILLER Principal office in New Jersey—
Treasurer.
H. F. MILLER City or town WEST ORANGE
Secretary. LAKE SIDE AVE
Street and number AND VALLEY ROAD
Name of Agent in charge H. F. MILLER

1. What is amount of your capital stock authorized? \$5000.00
2. Into how many shares is it divided? 2500
3. How many shares are fully paid, either in cash or by property purchased? 5000.00
4. How many shares are partially paid? NONE
5. What is the amount of your capital stock issued? \$5000.00
6. What is the nature of the business of your corporation? MINING AND PROSPECTING
7. Is your corporation engaged in manufacturing or mining? NOT OPERATING
8. If so, state where, A. In New Jersey,
City or Town,
Street and number,
B. If in other places, state where,
City or Town,
Street and number,
9. What is the total amount of your capital stock invested in MANUFACTURING OR MINING? \$5000.00
10. What is the amount of your capital stock actually employed in MANUFACTURING OR MINING IN NEW JERSEY? \$ NONE
11. What is the local assessed valuation for 1917 of your corporation's real and personal estate used in MANUFACTURING OR MINING IN NEW JERSEY?
Real Estate, \$ NONE
Personal, \$ NONE
I, the undersigned, do hereby certify as TREASURER of the MINING EXPLORATION CO. OF NEW JERSEY Company, that the foregoing return is correct and true. H. F. Miller [L. S.]
H. F. Miller Address, ORANGE, N. J.
G. J. Schulz Witness.

The above certificate is made in conformity with Section 3 of the act of April 18th, 1884, which provides that if any officer of any company required by this act to make a return, shall in such return make a false statement, he shall be deemed guilty of perjury.

1918

M. C.

Filed,

BASIS OF ASSESSMENT.

Capital Stock, \$.

Tax, \$.

This return MUST be sent addressed to the State Board of Taxes and Assessment, Trenton, N. J., BEFORE THE FIRST TUESDAY IN MAY.

This report is required by the State Board of Taxes and Assessment of New Jersey under the provisions of Chapter 19, Laws of 1906, "A statute supplement to an act entitled 'An act to provide for the payment of STATE TAXES upon certain corporations and for the collection thereof,' approved April, 1906," one thousand eight hundred and eighty-two, approved March 12th, 1906 and in accordance with said act this report must be filed with said Board ON OR BEFORE THE FIRST TUESDAY OF MAY ANNUALLY.

All corporations incorporated under the laws of this State, other than those which are subject to the payment of a State franchise tax assessed upon the basis of gross receipts, shall make annual returns to the State Board of Assessment on or before the first Tuesday of May in each year, and shall state therein the amount of the capital stock of such corporations issued and outstanding on the first day of January preceding the making of said return, together with such other information as may be required by said Board to carry out the provisions of this act. They shall pay an annual license fee or franchise tax of one-tenth of one per centum on all amounts of capital stock issued and outstanding up to and including the sum of three million dollars; on all amounts of capital stock issued and outstanding in excess of three million dollars and not exceeding five million dollars, an annual license fee or franchise tax of one-twentieth of one per centum; and the further sum of fifty dollars per annum per one million dollars, or any part thereof, on all amounts of capital stock issued and outstanding in excess of five million dollars; and any shares of stock either fully paid or partially paid in cash or by property purchased whether issued or otherwise shall be deemed to be shares of stock issued and outstanding until such shares or any substitute therefor shall have been retired and actually cancelled; provided, that this act shall not apply to railway, canal or building corporations, or to savings banks, consumer or religious corporations, or purely charitable or purely educational associations not conducted for profit, or manufacturing or mining corporations at least fifty per centum of whose capital stock issued and outstanding is invested in mining or manufacturing carried on within this State, and which mining or manufacturing corporations shall have stated in the annual return to the State Board of Assessment where the mine or manufacturing establishment of such corporation or corporations is or are located, the character of the ores mined or the goods manufactured, the total amount of its capital stock authorized in the business of mining or manufacturing and the amount of capital stock actually employed in New Jersey in carrying on such mining or manufacturing business. If any manufacturing or mining company carrying on business in this State shall have less than fifty per centum of its capital stock issued and outstanding invested in business carried on within this State, such company shall pay the annual license fee or franchise tax herein provided for companies not carrying on business in this State, but shall be entitled, in the computation of such tax, to a deduction from the amount of its capital stock issued and outstanding of the assessed value of its real and personal estate so used in manufacturing or mining.

After the tax has been levied by the State Board of Taxes and Assessment any corporation which desires to appeal to said Board for a review of the assessment is a readjustment of the tax so levied must file with said Board within FOUR MONTHS from the date of assessment a petition of appeal. Only verified tax is considered excessive and unjust. If the petition of appeal is not filed within four months, the right of appeal to the State Board shall be considered and treated as having been waived and the amount of tax levied shall be payable and collected as other taxes levied by said Board—C. L. 1906, Chapter 10.

January 21, 1936.

Mr. George J. Valin, K C
Sudbury, Ontario

Re: Edison Nickel Property

Dear Mr. Valin:

Due to other very urgent matters the above referred to subject has had to be put aside until now, we are answering your letter of August 2, 1935.

Per your suggestion we are sending you herewith the following papers and data:

- (1) Exemplified copy of the will and codicil of Mr. Thomas A. Wilson - Exhibit "A"
- (2) Date of death - October 18, 1931
- (3) Place of death and domicile - Llewellyn Park, Town of West Orange, County of Essex, State of New Jersey, U.S.A.
- (4) Short summary of the assets - Exhibit "B"
- (5) No other assets except interest in mining property in Township of Blessard, Province of Ontario, Canada.
- (6) List of properties in Ontario held in trust:-

<u>PARCEL</u>	<u>DESCRIPTION</u>	<u>ACRES</u>
2243	N $\frac{1}{2}$ Lot 6 Con. II W $\frac{1}{2}$ of S $\frac{1}{2}$ Lot 6 " "	280
2244	N $\frac{1}{2}$ Lot 8 " "	80
2245	S $\frac{1}{2}$ Lot 8 " "	240
2246	N $\frac{1}{2}$ Lot 7 " "	240
Estimated Value		\$5000.00

Exhibit
C

94

- (7) Name and address of a witness to the last will and testament of Mr. Thomas A. Edison--
Mr. Henry Lamahan
305 South Ridgewood Rd.
South Orange, New Jersey, U. S. A.

Occupation - Lawyer
General Counsel of Thomas A. Edison, Inc.

- (8) Believe minutes of meetings will give you the necessary evidence.
- (9) Minutes of meetings, held April 1, 1933, of Directors of the Mining Exploration Company of New Jersey. Exhibit "D"
- (10) Minutes of meeting, held May 3, 1933, of the Stockholders of the Mining Exploration Company of New Jersey. Exhibit "E"

Exhibits "D" and "E" are sent you to show what position was taken by the Executors of the Estate of Mr. Thomas A. Edison, position of the directors of the Mining Exploration Company of New Jersey and what action was taken relative to the ownership and transfer of title of the property.

The quit claim deed for the property executed by the Mining Exploration Company of New Jersey to the executors of the Estate of Thomas A. Edison, deceased, was not put on record. It was thought advisable to have the deed executed for our own records.

In the list of assets we have added the liabilities at date of death but have not included any death taxes or administration expense.

With this data and documents we trust you will be able to proceed with the formalities necessary, whereby the Executor (now Mr. Charles Edison, as Mr. Theodore M. Edison resigned as Executor on September 26, 1933) will be able to transfer the property at such time as he deems advisable.

If any further information or documents from here are necessary we shall be glad to supply them.

Yours very truly,

J. V. Miller

[ATTACHMENT]

Exhibit "B"

ESTATE OF THOMAS A. EDISON, DECEASED
Assets & Liabilities outside of Ontario
As of the date of death

ASSETS

Cash	86,276.92	
U. S. Government Bonds	1,316,680.54	
Accrued Interest	1,739.24	
R. R. Bonds	45,000.00	
Accrued Interest	600.01	
Stocks in U. S. Industrials	767,318.12	
Mortgages Rec. and Int. Accrued	34,422.50	
Notes " " " "	571,627.81	
Accounts Receivable	7,920.15	
Miscellaneous	1,256.66	
Real Estate	<u>46,620.00</u>	2,879,461.95

LIABILITIES

Funeral Expense	13,026.74	
Accounts Payable	7,347.61	
Reserve for Taxes	<u>12,446.26</u>	<u>32,820.61</u>
NET ESTATE		2,846,641.34

Exhibit "B"

[ATTACHMENT]

1

SPECIAL MEETING OF THE
BOARD OF DIRECTORS
OF
MINING EXPLORATION COMPANY OF NEW JERSEY

Held the 11th day of April, 1933
At Edison Laboratory
West Orange, New Jersey
At 4:00 P. M.

Present: H. F. Miller and W. S. Mallory, Directors

Also Present: Messrs. J. V. Miller, Henry Lanahan and

H. H. Eckert.

The Vice President, Mr. Mallory, acted as Chairman
of the meeting and Mr. H. F. Miller, Secretary, acted as
Secretary.

Mr. H. F. Miller stated that Mr. Mallory and him-
self were the only surviving members of the Board of
Directors, and that there were three vacancies, due to the
death of Messrs. Thomas A. Edison, James Gayley and James
Gaunt. He stated that it was desirable to take action to
wind up the corporation. To facilitate such action, it was
considered advisable to fill the vacancies existing in the
Board of Directors.

The following gentlemen were then elected as
directors to fill the vacancies due to the deaths of Messrs.
Thomas A. Edison, Gayley and Gaunt:

J. V. Miller

Howard H. Eckert

Henry Lanahan

Exhibit II

[ATTACHMENT]

2

Mr. H. F. Miller then stated that there had been no meeting of the Board of Directors since December 15, 1910, at which time action had been taken for the reduction of the per value of the capital stock of the corporation from \$100 to \$2. per share, and that there had been no meeting of the Board of Directors prior thereto since October 27, 1903; that the corporation had been inactive since 1904; that substantially all of the company's cash had been expended for the company's business prior to the end of 1903; that various leases to mining property in Canada had been taken in the names of various individuals associated with Mr. Thomas A. Edison, but not including Mr. Edison; that Mr. Edison had made expenditures prior to the incorporation of the company in the exploration of some of these properties; that apparently Mr. Edison had not been reimbursed for these expenditures prior to the formation of the corporation and no credit to Mr. Edison appears upon the company's books for such expenditures, but some of these leases had been assigned to Mr. Edison; that all of said leases had been permitted to lapse except four; that as to these four leases, all of the rentals had been paid and the other necessary conditions complied with, resulting in four certificates of ownership or grants under the Canadian Land Titles Act, to Mr. Edison, as follows:

[ATTACHMENT]

3

<u>Dated</u>	<u>Parcel No.</u>	<u>In the Register for</u>
June 6, 1913	2243	District of Sudbury East Section
June 5, 1913	2244	" " " " "
June 5, 1913	2245	" " " " "
June 5, 1913	2246	" " " " "

the said land being in the Township of Etesard, Province of Ontario; that original payment on these leases was at the rate of \$1.00 per acre and amounted to \$300; that the subsequent rentals were at the rate of 30 cents per acre per year; that the corporation had expended up to and including October 30, 1903, the sum of \$38,891.84, which was all the cash it had received up to that time except \$108.76; that this was all the cash ever expended by the Company in its operation and in connection with all of the property except the following two items subsequently paid to Mr. Edison:

January 31, 1907 -- \$ 23.17

December 31, 1928 -- 108.76

that all payments for rentals and exploration of the property, etc. and taxes after December 30, 1903 were made by Mr. Edison personally and charged to the corporation and appear upon the corporation's books; that Mr. Edison had never received any reimbursement for any of his expenditures subsequent to October 30, 1903, except the two small items above mentioned; that the remaining balance shown on the books of the corporation as a credit to Mr. Edison was \$26,061.00 as of April 28, 1932; that practically all of the expenditures made by Mr. Edison were on the properties covered by the grants mentioned above, whereas practically all the expenditure of the corporation were on other leases, and general exploration work and equipment for such work; that the assessed valuation of the four parcels mentioned

[ATTACHMENT]

4

above is \$8,400.00; that the corporation now has no assets except a possible interest in this land and no debts except its debt to the Estate of Thomas A. Edison; that the executors of the Estate of Thomas A. Edison are willing to release the corporation from all claims of the estate against the corporation (except rights arising from stock ownership) in consideration of the release by the corporation of any possible claim of the corporation against the Estate of Thomas A. Edison and to the four parcels specifically mentioned above, such release to be evidenced by the execution and delivery of a quit claim deed or deeds to the executors, or other suitable documents.

Mr. J. V. Miller stated that he was familiar with the property and the past exploratory work thereon; and that in his opinion in the absence of further very expensive exploratory work thereon and favorable results, the market value of the property would not be in excess of the assessed valuation.

After discussion the following resolution was unanimously adopted:

RESOLVED, that subject to the approval of the stockholders of this corporation, this corporation, in consideration of the release by the executors of the Estate of Thomas A. Edison of this corporation from all claims of the Estate against this corporation, (except rights arising from stock ownership) this corporation agrees not to set up any claim on behalf of the corporation of any interest or right in the four parcels of land for which certificate of ownership or grants under the Canadian Land Titles Act have been issued to Thomas A. Edison, as follows:

[ATTACHMENT]

5

<u>Dated</u>	<u>Parcel No.</u>	<u>In the Register For</u>
June 6, 1913	2243	District of Sudbury East Section
June 5, 1913	2244	" " " " "
June 5, 1913	2245	" " " " "
June 5, 1913	2246	" " " " "

the said land being in the Township of Blezard, Province of Ontario, Dominion of Canada, and agrees to execute and deliver to the executors of the Estate of Thomas A. Edison, a general release and a quit claim deed or deeds covering said parcels of land or other suitable instrument or instruments releasing to the executors of the Estate of said Thomas A. Edison, all right, title and interest of the corporation in and to said parcels of land, the said deeds or deeds or other instruments of release to be executed on behalf of this corporation and under its seal by its President or Vice President; and

BE IT FURTHER RESOLVED, that a meeting of the stockholders be called to take action upon the matter set forth in the foregoing resolution, said meeting to be held at the Edison Laboratory, on the 3rd day of May, 1933, at 2:30 P.M.; a notice of said meeting to be mailed to the stockholders of record.

Mr. Mallory stated that there was no purpose in continuing the existence of the corporation, and the following resolution was unanimously adopted:

RESOLVED, that this Board does declare it advisable and meet for the benefit of Mining Exploration Company of New Jersey that the same should be dissolved; and that a meeting of the stockholders be called for and held on the 3rd day of May, A. D. 1933 at 2:30 P. M. at the office of the corporation, Edison Labora-

[ATTACHMENT]

6

tory, in the Town of West Orange, County of Essex, and State of New Jersey, to take action upon the question of the dissolution of the said corporation, and further that the Secretary forthwith give notice of said meeting and of the adoption of this resolution.

There being no further business, the meeting adjourned.

H. F. Miller
Secretary

Read and Approved:

W.S.M. W. S. Mallory
H.F.M. H. F. Miller
J.V.M. J. V. Miller
H.L. Henry Lanahan
H.E.E. H. E. Eokert

I hereby certify that the foregoing is a correct and true copy of the minutes of the meeting of the Board of Directors of Mining Exploration Company of New Jersey, held at the Edison Laboratory in West Orange, New Jersey, on the 11th day of April, 1933.

Dated this 22nd day of January, 1936, and certified under the seal of the corporation.

H. F. Miller

Secretary

[ATTACHMENT]

MINUTES OF A MEETING OF THE STOCKHOLDERS
OF THE
MINING EXPLORATION COMPANY OF NEW JERSEY

Held Wednesday, May 3, 1933, at 2:30 o'clock P.M., at the office of the corporation, Edison Laboratory, in the Town of West Orange, New Jersey, pursuant to resolutions of the Board of Directors and a notice sent out in accordance therewith.

In the absence of the Vice President, Mr. W. S. Mallory, the meeting was called to order and presided over by Mr. Henry Lanahan.

The Secretary read the roll of stockholders entitled to vote at this meeting, with the following result:

STOCKHOLDERS PRESENT IN PERSON

<u>Name</u>	<u>Number of Shares</u>
Henry Lanahan	1
Harry F. Miller	1
John V. Miller	1
Edward H. Bokert	1

STOCKHOLDERS REPRESENTED BY PROXY

W. S. Mallory	1
W. S. Filling	16
C. M. Schweb	100
Thomas A. Edison, Incorporated	77
James Gayley (Est. of)	41
Thomas A. Edison (Est. of)	<u>2244</u>
Total represented in person and by proxy	<u>2493</u>

more than two-thirds of the stock issued and outstanding being represented by the holders thereof in person or by proxy.

The proxies presented were ordered filed with the Secretary.

The reading of the minutes of the previous meeting of the stockholders was, on motion, dispensed with by unanimous consent.

[ATTACHMENT]

8

The Secretary presented and read a copy of the notice of the meeting and submitted an affidavit showing that a copy of the same had been duly mailed on April 13, 1933 to each stockholder at his or her last known address.

The stock book of the corporation, together with a full, true and complete list, in alphabetical order, of the stockholders entitled to vote at this meeting, with the residence of each and the number of shares held by each, were produced and remained during the meeting open to inspection.

The Secretary read the minutes of the meeting of the Board of Directors held on April 11, 1933.

The following resolution was duly offered by Mr. H. R. Eckert, and seconded by Mr. John V. Miller.

WHEREAS, at a meeting of the board of directors duly convened and held on the 11th day of April, 1933, the Board of Directors of this corporation adopted the following resolution:

"RESOLVED, that subject to the approval of the stockholders of this corporation, in consideration of the release by the executors of the Estate of Thomas A. Edison of this corporation from all claims of the Estate against this corporation, (except rights arising from stock ownership) this corporation agrees not to set up any claims on behalf of the corporation of any interest or right in the four parcels of land for which certificate of ownership or grants under the Canadian Land Titles Act have been issued to Thomas A. Edison, as follows:

<u>Dated</u>	<u>Parcel No.</u>	<u>In the Register For</u>				
June 8, 1913	2243	<u>District of Sudbury East Section</u>				
June 8, 1913	2244	"	"	"	"	"
June 8, 1913	2245	"	"	"	"	"
June 8, 1913	2246	"	"	"	"	"

the said land being in the Township of Hazelard, Province of Ontario, Dominion of Canada, and agrees to execute and deliver to the executors of the Estate of Thomas A. Edison, a general release and a quit claim deed or deeds covering said parcels of land or other suitable instrument or instruments releasing to the executors of the Estate of said Thomas A. Edison, all right, title and interest of the corporation in and to said parcels of land, the said deed or deeds of other instruments of release to be executed on behalf of this corporation and under its seal by its President or Vice President; and

[ATTACHMENT]

9

"BE IT FURTHERED RESOLVED, That a meeting of the stockholders be called to take action upon the matter set forth in the foregoing resolution, said meeting to be held at the Edison Laboratory, on the 3rd day of May, 1933, at 2:30 P.M.; a notice of said meeting to be mailed to the stockholders of record."

"NOW, THEREFORE, BE IT RESOLVED, that the foregoing resolution adopted by the Board of Directors of this corporation and all action on behalf of the corporation therein provided for to be taken be and the same is hereby approved, ratified and confirmed.

A vote on said resolution was taken by ballot with the following result:

<u>For the Resolution</u>	<u>Against the Resolution</u>
2483	None

The Chairman then declared the resolution adopted.

Mr. Lannan then presented the following documents for execution pursuant to the resolution just adopted:

Quit-claim deed, dated May 3, 1933 from Mining Exploration Company of New Jersey to Charles Edison and Theodore M. Edison, Executors under the Last Will and Testament of Thomas A. Edison, Deceased;

Release dated May 3, 1933 from Mining Exploration Company of New Jersey to Charles Edison and Theodore M. Edison, Executors under the Last Will and Testament of Thomas A. Edison, Deceased;

Release dated May 3, 1933 from Charles Edison and Theodore M. Edison, Executors under the Last Will and Testament of Thomas A. Edison, Deceased to Mining Exploration Company of New Jersey.

The Secretary read the documents, and the same were approved by all of the stockholders present in person or by proxy.

The Secretary was instructed to procure the execution of the two documents to be signed on behalf of this corporation and to deliver the same to the executors of the Estate of Thomas A. Edison, upon the execution and delivery of the release to the corporation by the executors. The Secretary was further instructed to report to the directors when this has been done.

[ATTACHMENT]

10

The Secretary then read the following resolution adopted by the Board of Directors on April 11, 1933:

"RESOLVED, That this Board does declare it advisable and meet for the benefit of Mining Exploration Company of New Jersey that the same should be dissolved; and that a meeting of the stockholders be called for and held on the 3rd day of May, A.D. 1933 at 2:30 P.M. at the offices of the corporation, Edison Laboratory, in the Town of West Orange, County of Essex, and State of New Jersey, to take action upon the question of the dissolution of the said corporation, and further that the Secretary forthwith give notice of said meeting and of the adoption of this resolution."

The following resolution was then unanimously adopted:

RESOLVED, that a vote of the stockholders of this corporation be taken by ballot at this meeting upon the question of the dissolution of this corporation.

Thereupon the vote by ballot was taken on the question of dissolution.

The Secretary reported that the result of the vote by ballot was as follows:

In favor of the dissolution of the Corporation 2483 shares

Against the dissolution of the Corporation - No shares

The Chairman stated that more than the necessary two-thirds of the outstanding shares (there being 2,500 shares outstanding) had voted in favor of the dissolution of the corporation.

The Chairman then requested those voting in favor of dissolution to sign a form of consent to such dissolution in accordance with the statutes of the State of New Jersey. Thereupon those who voted in favor of the dissolution signed the required form either in person or by proxy.

The Secretary was instructed to attend to the filing of the certificate with the Secretary of State and the necessary publication of the certificate of dissolution to be issued by the Secretary

[ATTACHMENT]

11

of State, it being understood that the certificate signed at this meeting is not to be filed with the Secretary of State until after the quit-claim deed and releases approved at this meeting have been executed and delivered.

The Secretary was instructed to insert in the minute book for the purpose of reference the following papers:

1. Copy of notice of this meeting and proof of service thereof.
2. Form of Proxy.

There being no further business, the meeting adjourned.

Read and Approved:

W.S.M. W. S. Mallory

H. F. Miller
Secretary

H.F.M. H. F. Miller

J.V.M. John V. Miller

H.H.E. H. H. Eckert

H.L. Henry Lanahan

I hereby certify that the foregoing is a correct and true copy of the minutes of the meeting of the Board of Directors of Mining Exploration Company of New Jersey, held at the Edison Laboratory in West Orange, New Jersey, on the 11th day of April, 1933.

Dated this 22nd day of January, 1936, and certified under the seal of the corporation.

H. F. Miller
Secretary

**MINING EXPLORATION COMPANY OF NEW JERSEY
AND RELATED RECORDS
THOMAS A. EDISON FILES**

These documents cover the period 1900-1916, with most of the material dating from 1901-1908. Included are notes and drawings in Edison's hand, correspondence addressed to Edison, and prospecting reports. The documents relate to nickel and cobalt mines, ore samples and purchases, and property rights. Much of the correspondence pertains to the administration of Edison's mining properties in the Sudbury and Nipissing districts of Ontario, but there are also letters concerning property in Oregon, Connecticut, and elsewhere. A few items relate to Edison's interest in magnetic surveying and to a request from the U.S. Geological Survey for a hand-held magnetic separator. There is also an undated report by an unidentified author concerning the international nickel industry. The letters are mainly by Edison's representatives, including his brother-in-law, John V. Miller; Walter S. Mallory, vice president of MECNJ; and John F. Randolph, secretary-treasurer. Additional correspondents include mining engineer and Edison employee Cloyd M. Chapman; attorney John T. Hubbard of Litchfield, Connecticut; and Horace M. Wilson, mining scout and manager of the Darby Mine. Many of the letters bear Edison marginalia.

Thomas A. Edison Files - Correspondence (1900)

This folder contains correspondence and other documents relating primarily to the analysis of nickel and the appraisal of mining properties. Included are letters concerning an invitation by Samuel J. Ritchie of the Nickel Copper Co., Ltd., of Ontario for Edison to attend an exhibition of new processes in copper and nickel production.

Thomas A. Edison Files - Correspondence (1901)

This folder contains correspondence and other documents relating to nickel-bearing properties. Most of the documents deal with the Sudbury district of Ontario, but some concern Oregon, Connecticut, and other locations. The correspondents include David T. Day of the U.S. Geological Survey and J. C. Ryan of the Soho Group of Mines in British Columbia. Several items relate to Edison's tour of the Sudbury district during August 1901 and his subsequent interest in nickel-bearing properties. Included are notes in Edison's hand regarding properties and sample ores; notes pertaining to the status of lease applications; and field reports by John V. Miller and Cloyd M. Chapman. Also included are an incomplete draft of Edison's agreement with the Department of Crown Lands in Ontario; a prospectus for a nickel company; and an undated report on the international nickel industry. In addition, there are documents concerning Edison's interest in magnetic surveying needles; the estimated amounts of nickel required by the Edison Storage Battery Co.; and a request from the U.S. Geological Survey for a hand-held magnetic separator.

Thomas A. Edison Files - Correspondence (1902)

This folder contains correspondence and other documents relating to nickel-bearing properties in the Sudbury district of Ontario, as well as in Arizona, Connecticut, Oregon, Pennsylvania, and Australia. Most of the letters are to or from Edison, John V. Miller, or John F. Randolph. Many of the letters to Edison are field reports from John V. Miller. Also included is correspondence from John T. Hubbard, an attorney in Litchfield, Connecticut, with draft replies in Edison's hand; and a 16-page report of prospecting work performed during the fall and winter of 1901 in Ontario, Connecticut, and Pennsylvania.

Thomas A. Edison Files - Correspondence (1903)

This folder contains correspondence and other documents relating to nickel-bearing properties in the Sudbury district of Ontario. Most of the letters are to or from Edison, John V. Miller, or Walter S. Mallory. Many of the letters to Edison are field reports from John V. Miller. Other letters pertain to camp supplies or field instruments, including a magnetometer and a diamond drill. Also included are a few items concerning the financial affairs of the company; an undated list of stock owners; and an agreement between Edison and the Rat Portage Diamond Drill Co., Ltd. Some documents may be difficult to read because of spreading and smearing ink.

Thomas A. Edison Files - Correspondence (1904)

This folder contains correspondence and other documents relating to nickel-bearing properties in Ontario. Most of the letters are to or from Edison, John V. Miller, or Walter S. Mallory. The material pertains mainly to surveys and drilling in the Sudbury district.

Thomas A. Edison Files - Correspondence (1905)

This folder contains correspondence and other documents relating to nickel- and cobalt-bearing properties in the Sudbury district of Ontario. The documents concern mining properties, including options on the Darby Mine; the transmittal of ore samples; and the purchase of ores. Most of the letters are by Horace M. Wilson, mining scout and manager of the Darby Mine. Also included is correspondence from the Toronto law firm of Denton, Dunn & Boulbee, along with a few items by John V. Miller and Walter S. Mallory.

Thomas A. Edison Files - Correspondence (1906)

This folder contains correspondence and other documents relating to the Darby Mine and other cobalt-bearing properties in the Sudbury district of Ontario. The correspondents include Edison and Horace M. Wilson, mining scout and manager of the Darby Mine. There are also a few reports from D. H. Haight of Ontario.

Thomas A. Edison Files - Correspondence (1907)

This folder contains correspondence and other documents relating to the Darby Mine and other cobalt-bearing properties in the Sudbury district of Ontario. The correspondents include Edison and Horace M. Wilson, mining scout and manager of the Darby Mine. The letters deal with Edison's decision to abandon his search for cobalt and close the Darby Mine and with negotiations for the sale of the property and machinery. There are also letters concerning operations at the mine and the transmittal of ore samples.

Thomas A. Edison Files - Correspondence (1908)

This folder contains correspondence relating to the proposed sale of the Darby Mine and its machinery. The correspondents include J. Bogert Bartram, a Toronto attorney, and other prospective buyers.

Thomas A. Edison Files - Correspondence (1910-1916)

This folder contains correspondence relating to the administration of mining properties in the Sudbury district of Ontario. Some of the documents bear Edison marginalia.

Thomas A. Edison Files - Notes and Drawings (undated)

This folder contains undated notes, drawings, memoranda, and cost estimates. All items are by Edison. Included is material relating to saucers, burners, and similar equipment, possibly intended for the assay work of prospecting parties in the Sudbury district of Ontario. Also included are two versions of a document entitled "Design for Small Nickel Concentrating Works," possibly written during the period 1901-1904.

**Mining Exploration Company of New Jersey and Related Records
Thomas A. Edison Files - Correspondence (1900)**

This folder contains correspondence and other documents relating primarily to the analysis of nickel and the appraisal of mining properties. Included are letters concerning an invitation by Samuel J. Ritchie of the Nickel Copper Co., Ltd., of Ontario for Edison to attend an exhibition of new processes in copper and nickel production.

Approximately 20 percent of the documents have been selected. The selected items all pertain to the proposed exhibition.

Hamilton, Canada, August 30th 1900.

Thomas A. Edison Esq.,
Lewellyn Park,
ORANGE, N.J.

Dear Mr. Edison:-

On next Monday, September 3rd, there will be a public exhibition here of a new process for producing fine copper and fine nickel directly from either the mattes or the ores and of producing several other by-products at the same time by the same process.

You have been making inventions for the world for a good many years. Come and see what has been done here. I want you to see the operation. I will pay your railway fare and can probably show you how you can do some good for yourself outside of seeing what has been done and what can be done here. We will take as good care of you as we know how. I have been here so much for the last six months that I have almost forgotten that I have a home at Akron, Ohio.

This Company has now at least four times as much copper and nickel as the Canadian Copper Company has. Come and see us. I enclose formal invitation.

Yours truly,

S. J. R. - C.

S. J. RITCHIE,

ENCL.

[ATTACHMENT]

A. T. WOOD, M.P.,
PRESIDENT.

JOHN MOSSIE,
VICE-PRES.

JOHN PATTERSON,
SECRETARY.

THE

NICKEL COPPER COMPANY OF ONTARIO
LIMITED.

CAPITAL \$10,000,000.

Hamilton, Canada, August 24th, 1900.

Dear Sir:

An exhibition of special interest to the stockholders of The Nickel Copper Company of Ontario, Limited, and of general interest to all owners in Canadian Copper Nickel properties, will be given in Hamilton, on Monday, September 3rd, 1900.

As one interested in these mines and ores and their treatment, manipulation and manufacture, you are cordially invited to be present.

Upon arrival at the New Royal Hotel you will be fully advised and shown to the place of exhibition.

A Dinner will be served at the new Hotel Brant, on Burlington Beach.

Respectfully,

John Patterson
Secretary.

Guests will meet at works 4 p.m.

Hamilton, Ontario, Sept. 1, 1900.

T. A. Edison.

If possible to come, do not fail to be here next Monday
as I wrote you. Please answer Royal Hotel.

(Signed) S. J. Ritchie.

W. U. T. Co.

**Mining Exploration Company of New Jersey and Related Records
Thomas A. Edison Files - Correspondence (1901)**

This folder contains correspondence and other documents relating to nickel-bearing properties. Most of the documents deal with the Sudbury district of Ontario, but some concern Oregon, Connecticut, and other locations. The correspondents include David T. Day of the U.S. Geological Survey and J. C. Ryan of the Soho Group of Mines in British Columbia. Several items relate to Edison's tour of the Sudbury district during August 1901 and his subsequent interest in nickel-bearing properties. Included are notes in Edison's hand regarding properties and sample ores; notes pertaining to the status of lease applications; and field reports by John V. Miller and Cloyd M. Chapman. Also included are an incomplete draft of Edison's agreement with the Department of Crown Lands in Ontario; a prospectus for a nickel company; and an undated report on the international nickel industry. In addition, there are documents concerning Edison's interest in magnetic surveying needles; the estimated amounts of nickel required by the Edison Storage Battery Co.; and a request from the U.S. Geological Survey for a hand-held magnetic separator.

Approximately 50 percent of the documents have been selected. The unselected items include letters of Introduction; routine correspondence concerning mining properties or mineral samples; requests for maps; and prospectuses of the Nickel Copper Co. of Ontario, Ltd., and the Great Lakes Copper Co.



A. B. DICK COMPANY, *me*

SOLE AGENTS
"DICK" CHICAGO

MAKERS OF
EDISON'S MIMEOGRAPH AND SUPPLIES
AND THE PLANETARY PENCIL POINTER
12151 LAKE STREET,
Chicago, *May 11* 1901.

Donald G. Cropps
Bring

My Dear Edison:

I have shipped by express today a box of samples sent me by E. Cropps. These contain nickel & copper and come from the mining Lake Country Canada. Cropps says the vein is from 8 to 40 feet wide and has been followed for $2\frac{3}{4}$ miles. Could be traced for 10000. Quantity of wood sample taken from in property (1000 L.P.) If you will go through these samples we can talk it over when I come down in about two weeks.

Cropps says that rich copper sulphate sample straight down runs from 10" to 40" wide in surface & he has followed it about 200 ft.

Thank you very much for all work for which I am thankful.

The South Park Commissioners have ruled out all automobiles excepting electric.

Sincerely Yours
H. B. Dick

Established 1855.—Incorporated 1878.
 Sweet, Dampster & Co.
 110 West 26th Street, New York.
 STORE PHONE: EXPRESS 49.
 FACTORY: MAIN 5187.
Answered May 9, 1901
Chicago, July 2nd 1901

Mr Thomas A. Edison
 Orange
 N. J.

Dear Sir:

I am in receipt of yours of June 26th and in reply will say that I have sent you what nickel ore I have on hand by to-day's express. While it may not be the average ore of the Richmond it is the same ore I sent to the Oxford Copper Co. One lot of which assayed 6.44% nickel and the other lot 7.21% nickel. I am satisfied that there is plenty of such

Established 1855.—Incorporated 1878.
 Sweet, Dampster & Co.
 110 West 26th Street, New York.
 STORE PHONE: EXPRESS 49.
 FACTORY: MAIN 5187.
#2
Chicago 1901

ore to be had, and our ore took the medal at the Chicago World's Fair, and an honorable mention at the Paris Exposition of 1900, and was one of the U.S. Mineral exhibits that took the gold medal as a nation.

Please let me hear from you if you can reduce the cheaply, as the Hans Frank process is without doubt a success, and method a cheap one. Method of which is mentioned in Engineering and Mining Journal of Sept 8th page, 272.

Established 1865 — Incorporated 1891

Smelt, Pumpster & Co.

Union Pacific Station

SIDE PHONE: EXPRESS 49.
FACTORY " MAIN 5187.

Chicago

190

If I do not make a
sale of this property
The first man that can
reduce this ore cheaply
and can also reduce
a 2 to 3% ore at a profit
can have a splendid
opportunity to make
a good thing for himself
If you are going to make
experiments, please let
us know the results.
And oblige,
Yours Very Truly
J. H. Woodrow

Glencoe, Ill.

The ore will be marked
with tag of above firm and
a note inside of bag.

[ATTACHMENT]

JH Winslow Esq Dr Sir -

Sample of Nickel ore recd -

Copy of ~~sent~~^{am}
Please send me ~~what~~^{the} reports on the district &
mines & on your mine as well. and all particulars
If I am to start on working up a process
I want all the data I can obtain.

Yours
Edison

[ATTACHMENT]

Send this
~~Answer~~
Letter right away
Edison

INDUSTRIAL COMPANIES
The Buffalo Cold Storage Co.
The Buffalo Electric Power Co.
The Buffalo Gas & Water Co.
The Buffalo Heating & Ice Co.
The Buffalo Ice & Cold Storage Co.
The Buffalo Manufacturing Co.
The Buffalo Paper Co.
The Buffalo Printing Co.
The Buffalo Rubber Co.
The Buffalo Steel Co.
The Buffalo Tanning Co.
The Buffalo Textile Co.
The Buffalo Woolen Co.



WARREN WOODS, PRESIDENT
F. A. WOODS, SECRETARY
H. C. WOODS, MANAGER

Thomas A. Edison Esq.
Orange, N. J.

Dear Sir

As you requested, I wrote Mr. Ashley for more information on the C. B. Nickel M. Co., I received his reply a copy of which I enclose herewith. If I can be of more service to you or if you discover anything of interest to me I will be greatly obliged if you can get the time to advise me. Thanking you kindly for your interest

Very Respectfully

W. Woods
2 Sept 1901 804 D's Morgan Bldg
of Mine Bldg Pan Am Exp. Buffalo

INDUSTRIAL COMPANIES
 Crescent Gold Extraction Co.
 Wells Packer Power Co.
 The Cooper Corp. Case Western & Light Co.
 The Water Control Mining Supply Co.
 United Mine Workers Transportation Co.
 The American Power & Light Co.
 The Gold Coin Mining & Leasing Co.
 The Consolidated Gold Mines Co.
 The New Mining Co.
 The Buffalo Mt. Consolidated Gold Mining Co.
 The Barton Gold Mining Co.
 The American Electric Power & Mining & Tunnel Co.
 The Hudson Victor Mines Co.
 The H. H. H. Mining Milling & Land Co.
 The Republic Gold Extraction Co.
 The American Mines Co.
 The New Zealand Mining Co.
 The American Gold & Silver Mining Co.
 The Morning Star Mining & Leasing Co.
 The Russell A. Consolidated Mining Co.
 The Bull Mountain Mining Co.
 The Bull Mountain Consolidated Mining Co.



PAN-AMERICAN EXPOSITION

D. S. MORGAN BUILDING

Buffalo, New York,

Joliet, Ill. 8/12/01.

Dear Sir:-

Replying to yours of the 6th. The \$60,000 I spoke of included \$13,000 on mortgages given S. P. Farmlay formerly Truitt & Stockholder for his interest and services. Is no other indebtedness against the Company except for monies furnished for expenses for patents, taxes Watchman & etc by a portion of the owners. We have nearly machinery enough on the ground now and a number of ore and log wagons, carts etc and harness (10 or 12) set tools (full equipment) Brick engine and boiler house. Saw mill R. K. Smith & Carpenter shop and tool house all complete with tools. 250 H. P Corliss engine and sterling boilers set up besides several dwelling houses and hotel buildings. The balance of money spoken of is needed to put up the balance of machinery, smelter etc. The Company is controlled by five Directors and three or four others. Jno. H. Winslow is President and my brother-in-law George Oliver is Secy. both at 232 Monroe St, Chicago, Ill.

Stock is all in the Treasury, kept there to save stamp tax. I have no reports now in hand I could send you. We had two car loads shipped to New York to be worked. They saved about 75% which is a big average as compared with the Sackby Canada Mines. 2 1/2 % is good for those mines and costs twice as much to mine and smelt as ours, ours being free ore and

[ENCLOSURE]

INDUSTRIAL COMPANIES
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.

Mining Companies
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.
The American Cyanamid Co.



Buffalo, New York, 1901

easily worked. We took first premium at the Worlds Fair over Sudbury and New California for best grade of ore etc, and they had a big exhibit. Nickel is now .55 to .60 cents per lb. In "Iron Age" would cost us about \$.10 to produce, we have capacity for fifty tons per day of ore or more, in the machinery as planned.

Yours truly,

J. N. Ashley

The Corporation of the Town of Sudbury.

J. Fournier, - Clerk and Treasurer.

Sudbury, Ont., August 17 1901

To Thomas A. Edison Esq,

Sir,

In behalf of the people
of Sudbury we desire to
extend to you the most cordial
welcome to our town, and
also to assure of our great
appreciation of your visit to
this district.

Your world known reputation
as a great inventor, has
preceded you here, and we feel
that your incessant work, in
the development of that subtle
energy called "Electricity", is fully
deserving public recognition
wherever you may go; therefore,
we take this opportunity to express
to you our admiration for the
many important inventions
in the electrical field, for which
mankind

The Corporation of the Town of Sudbury.

J. Fournier, - Clerk and Treasurer.

Sudbury, Ont., 190

Mankind is indebted to your genius.

In regard to your visit here, we trust that the country will be interesting to you - this portion of New Ontario, abounds with Natural resources of all kind. We have here, as you know, the only Nickel Mines of any importance on the American Continent, and we hope that you may become interested in their developments in a practical way.

The Mineral belt of the district has been pretty thoroughly explored, and a large number of Nickel properties have been bought up by different Companies within the past few years. But there are still left in the hands of the original owners enough good workable ore deposits to equip two or more

The Corporation of the Town of Sudbury.

J. Fournier. - Clerk and Treasurer.

Sudbury, Ont., 190

more new Companies with
plenty of mines. The demand for Nickel
is growing rapidly every year
and at the present high price
for the metal and its oxides
there is undoubtedly big money
to be made in the proper
working of these Nickel-Copper
mines.

We trust that your visit
to the district may be
pleasant and eventually
profitable to you and
beneficial to our town.

In behalf of the Citizens -

"J. J. Ryan"
Mayor

Stephen Fournier,
Town Clerk



[PHOTOCOPY]

The New American Hotel

HEATED THROUGHOUT BY STEAM
LIGHTED BY ELECTRICITY
ELECTRIC BELLS IN EVERY ROOM
SAMPLE ROOMS FOR COMMERCIAL
TRAVELLERS

J. N. Doyle, - Proprietor.

LARGEST AND FINEST HOTEL IN THE
DISTRICT.
STRICTLY FIRST-CLASS
RATES, \$1.50 TO \$2.00 PER DAY.

Dudbury, Ont. Aug. 12, 1901

Mr. Dolan -

Mr. Edison leaves the following directions
for you.

Upon arrival put up at American Hotel.
If you are not already supplied purchase
the following:

Canvas Coats -	at	Gold Ball Store -
Ordinary pants -	"	W. C. Good & Co.
Flannel shirt -	"	"
High-top boots -	"	" or Gold Ball.

Unless you a short of funds pay for them
otherwise charge to my account.
Bring as few dollars as possible as all will have to
be carried. We are taking a couple of changes of
fundamental, extra shoes, socks, smocks & toilet
articles.

Leave your trunk in the office of Mr. Edison
which you can find by inquiring. If locked
get key from Dudley. The charter is at the door.
Take a train on the Soo line to Port Huron
Station and put up at the hotel. We shall send
in for you as soon as possible.

Yours truly
John V. Miller

HON. A.T. WOOD, PRESIDENT.

J. R. MOODIE, TREASURER.

JOHN PATTERSON, SECRETARY.

The Nickel Copper Company of Ontario, Limited

ROOM 12 - 39 JAMES ST. SOUTH.

Hamilton, Canada. August 20th 1901.

Thos. A. Edison Esq-
Orange, N. J.

*Now
file
Hickes
Put on new
desk
undbray*

Dear Sir :

Having been informed that you were interested in the Nickel situation, I went to New York last week for the purpose of calling on you to discuss matters relative to Nickel which I thought might be of interest to you, and finding you absent I took the liberty of telegraphing to you at Sudbury, and thank you very much for your prompt reply. I hope that you will find it convenient to stop over here on your way back.

I have, within the last year and a half, done considerable work on the Nickel question, and have had patented to me a process by which we can refine Nickel and Copper from the matte direct, at a cost not exceeding 3¢ per pound, which would make it about 10¢ per pound to produce chemically pure Nickel from the Ore in the ground, obtaining the Cobalt separate and pure as a by-product. We have large tracts of Nickel lands under control, which we partly own outright, or cover by option. I think that if you would investigate my process, which we have in operation on a technical experimental scale large enough to be thoroughly demonstrative, together with our properties, and we could discuss matters in general, that it might turn out to our mutual advantage, and I would thank you very much, should you find it impossible to stop over here, if you would appoint a time when I could call on you at any place convenient to you.

An early reply will greatly oblige-

Respectfully yours-

Wm. A. French.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
DIVISION OF MINING AND MINERAL RESOURCES

HLS/D

WASHINGTON, D. C., Aug. 22, 1901.

Mr. Thomas E. Edison,
Orange, N.J.

Nickel

My dear Sir:-

The work on your nickel proposition is proceeding
well.

What I have heard of your cement work makes me feel
that it is only fair to you to submit to you a proposition
which I have just submitted to another wealthy friend I have
in the cement manufacture, with the feeling that your knowledge
of cement manufacture will make this not only interesting to
you, but with the friendly disposition which you have expressed
it is only fair to give you a chance at it as well as my friend
Fackenthal.

Yours very truly,

D. W. Whitby

Aug 28 1901

I will give \$500. in cash to the man
whose needle locates the best workable
nickel mine - which I can patent,

\$300 for the next best workable mine

\$200 "

\$100 "

If two needles indicate the deposit
unmistakenly then the money is to
be divided equally - for instance in the
case of the \$500, each gets \$250 - but if
more than two needles locate the same
deposit then all the needles unmistakably
indicating get \$250. each -

To avail of this each man must
work during the season to be determined
by Chapman & Miller ^{Chapman & Miller} ~~Chapman & Miller~~
All disputes to be decided by
Miller & Chapman - J. E. Edison

[AUGUST 1901]

The New American Hotel

HEATED THROUGHOUT BY STEAM.
LIGHTED BY ELECTRICITY.
ELECTRIC BELLS IN EVERY ROOM.
SAMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.

S. N. Doyle, - Proprietor.

LARGEST AND FINEST HOTEL IN THE
DISTRICT.

...STINGRAY, FIRST-CLASS...
RATES, \$1.50 TO \$2.00 PER DAY.
(June-July 1902)

Sudbury, Ont.

Sunday 100

Malboro

Asentani immediately and quickly by teleg or
Telephone if you can get ~~5~~ five (5) Magnetic surveying needles
the same as we ordinarily use. - Hurley maker of surveying
instruments at Troy report make them. They show them
in their Catalogues - If you cant buy 5 buy what you
can - I am not certain but think we may have 1 or 2
old ones at lab that can be fixed up = There may
be an extra one at the mine I remember a small
one there = Have John Ott put ironies & others
on fixing them if you succeed in finding ~~any~~
any - also send six small hand compasses
about size of 1/2 dollar to get north with,

In case you cant find any and Hurley has
none = Then have John Ott put as many
new on day & night to make 5 = I enclose
instructions for John Ott = I have struck
it great here at Sudbury - I find that needles
have never been used = We took out our big
needle & went over a mine & it stood
Dead 90 - 100 ft away went to Zero -
The ore here is pyrrhotite or magnetic
pyrites & the Chumpas have never caught
on = The only mines that have been
OVER

discovered are on outcrops whereas
more than $\frac{1}{2}$ of the belt is heavily wooded
& also covered deeply - The reason
I want 5 needles is that the sections
here are 2500 ft wide & one mile long
by using 5 men 500 ft apart then can
walk over about 6 sections a day &
spot the deposits - I must do it with
a rush because the moment they get
onto it, the game will be up -
They are selling deposits here for from
\$50,000 to 200,000, each - Now I have
found that no one can be trusted
here so I must get 3 men from the
Laboratory or Ogden - The land is govt
land & can be secured by recording
for ~~225~~ 3²⁵ per acre - The mining laws
are very liberal - I think you better

The New American Hotel

HEATED THROUGHOUT BY STEAM,
LIGHTING BY ELECTRICITY,
ELECTRIC BELLS IN EVERY ROOM,
SAMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.

J. N. Doyle, - Proprietor.

LARGEST AND FINEST HOTEL IN THE
DISTRICT,
STRICTLY FIRST-CLASS,
RATES, \$1.00 TO \$2.00 PER DAY.

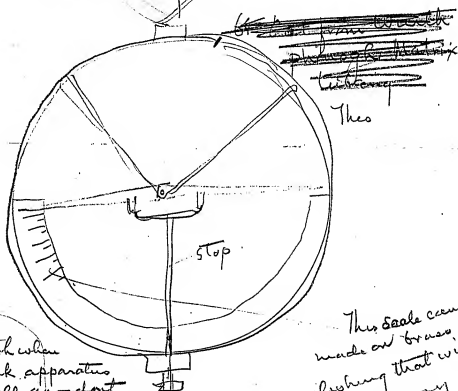
Sudbury, Ont., 190

2

Mr. Carl Fried and see if he has a reliable
young fellow - also if Freddy Densald can
be spared for a month John Otto boy would
answer if he is not going to school would
rather have grown up boys or men - If
Johnny Congdon is through with his work
he would do be good - Perhaps one of the
MacIntosh boys could be got, in any event
I want three of our boys to come with the
needles no use sending them ~~westward~~ ^{westward} ^{or go}
needles are ready. Quickest way to get
here I guess is to go via Toronto
let them carry trunks & a grip in addition
warm underclothing ~~also~~ necessary - Rubber
Boots etc Carl be put here = There is a
good hotel here = I will stay till they come
to start them going & then return - The belt
is narrow & one month will cover all we
want. I am having a bad time with my
stomach but since I have arrived here
the walking over the rocks has completely
slapped it so I am going to go over some
of the ground & visit the mines myself -
I learn there is a nickel trust & some
farms & I don't want to be pinched

~~the~~ The moment you get this letter
get a big hustle on for the needles to
the men — ~~for the needles to~~

~~the~~ If John makes the needles
just make them plain.



Then telegraph when
you think apparatus
men will go — don't
use word needle in telegram
as Operator here is a nickel
sharp — be careful in all telegrams
to give anything away about magnetic
interference — Telegraph me the moment you
get this — say — "Letter read"

This scale can be
made on brass.
No polishing that will
delay is necessary

[AUGUST 1901]

The New American Hotel

HEATED THROUGHOUT BY STEAM,
LIGHTED BY ELECTRICITY,
ELECTRIC BELLS IN EVERY ROOM.
SAMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.

LARGEST AND FINEST HOTEL IN THE
DISTRICT,
STRICTLY FIRST-CLASS.
RATES, \$1.00 TO \$2.00 PER DAY.

S. M. Doyle, - Proprietor.

Sunday, Oct. Sunday 1900

John All - I want 5 magnetic surveying
needles the same as those we usually use
for carrying in the hand - Design them
so as to be quickly made withagate or
caphrus supports. Tronika is familiar with
these. The ring can be of $\frac{1}{8}$ brass soldered
to the index can be of brass & divided right
on the brass - put the dampening or slopping
attachment on to check slowing also the
little rider on the needles to balance it
horizontal. Have Tronika or Kaiser balance
them - Set up the 60 instrument & have
Kaiser come up & test their sensitiveness
before you turn them over to Mallory
Have Tronika clear night & use as many
now as you can as I am waiting up here
till they come & I don't want to wait
long -

Edison

Nickel ¹⁰⁰⁴
PAYNE INVESTMENT COMPANY, INC.
870 BIRCH BUILDING
NEW YORK 100

G. M. DAULTON, PRES.

G. F. HARTMAN, VICE-PRES.

OLCOTT PAYNE, MAN. & TREAS.

CABLE ADDRESS "PAYNE GRATEFUL" N. Y. C. 1008

OVER

Answered
Sept. 12, 1901

SEATTLE, WASHINGTON,

Sept. 5, 1901

Thos. A. Edison Esq.

Menlo Park, N. J.

a recent article in the New York
Commercial world indicate that you and your business
associates were looking up the supply of nickel
and nickelores. I would like to be advised if you
would consider the purchase on a reasonable bond
of a partially developed mine showing a
very large tonnage of ore running high
in nickel. If you or associated would
seriously consider the matter we would go
to the expense of making an examination
& present the proposition in detail.

Yours

Olcott Payne

Sample received from party -
Lab. # 170

[ON BACK OF PRECEDING PAGE]

P

I suppose you refer to
the Silicate of nickel deposits
of Oregon & Washington
if so. I have a great amount
of data regarding them but
so far the grades are too
low for commercial work.
Compared to the Canada
deposits, I would however
like some data as I intend
sending a man out next
summer to visit the class
of mines.

Don't know squares?
P. # 100.

TELEPHONE N.Y. 2812-3817 ST.

TELEPHONE CHICAGO, 1400 HARRISON.

*Answered
Sept 9 - 1901*
Wesley Allison
Wesley Allison

Wesley Allison
Vanderbilt Ave. 414 St. New York
325 Rockery, Chicago

Noted by Mr. G. S. Still, 1901

Mr. Thomas A. Edison,

Orange, N. J.

My Dear Mr. Edison:-

I have just received in my mail this morning a copy of G. S. Still's circular which might be interesting to you to read.

I enclose herewith a copy of the five year guarantee given by the Porter Battery Co. to their customers.

I have written the Government fully regarding the Nickel property and would like to know if your expert has run across the Worthington or Trilabelle properties? Either one or both of these properties can be purchased at a very low figure.

With kindest regards, I am

Very truly yours,

Wesley Allison

Have surveyed the Worthington
but do not recognize the mine under
name of Trilabelle. How much do they
want for both or each separate -
E

ENG.

Established 1865—Incorporated 1871
Steele, Dempster & Co.
Minneapolis, Minn.

STOCK PRICE: EXPENSE 40.
FACTORY: PAID 500.

Answered
Chicago, Sept. 16th 1901

Mr Thomas A. Edison
Orange N.J.

Dear Sir:

I am in receipt of your favor of Sept 3rd and shall endeavor as near as possible to explain the situation of the Nickel property in Oregon.

Nickel Mountain which consists of about 1100 acres, all patented, is owned by two companies, one the "Oregon Nickel Co" the owners of which reside in Oakland California. The disposal of this property has been placed in my hands. The other company formerly the International, is now

Established 1865—Incorporated 1871
Steele, Dempster & Co.
Minneapolis, Minn.

STOCK PRICE: EXPENSE 40.
FACTORY: PAID 500.

#2

Chicago

1901

The American Nickel Co. Of this I am President and part owner, and the stock holders, of which reside in and near Chicago. It is my belief that if you can suggest a sufficiently attractive royalty and the time of royalty be not too long, with an option to purchase, and can present this in proper form - I can then place it before our stockholders, with a reasonable hope of success.

As this is an entirely new idea to me, I would hardly know how to present it; and if you would kindly assist

Established 1808—Incorporated 1891

Steele, Dempster & Co.

• Notice to Geo. Franklin

#3

STORE PHONE: EXCHANGES 49.

FACTORY " " FROM DIST.

Chicago

1902

me. I would do all in my power to aid in establishing a plant which would control all of the nickel in the United States.

Of course you are aware that the Canadian Government has already placed a duty of six cents per pound on nickel contained in ore on matte to go into effect as soon as it is produced in merchantable quantity, and as soon as the Ongou mines are in operation the U.S. will also without doubt, place a duty upon nickel shipped into this country in any form. I will enclose a couple of extracts

Established 1808—Incorporated 1891

Steele, Dempster & Co.

• Notice to Geo. Franklin

#4

STORE PHONE: EXCHANGES 49.

FACTORY " " FROM DIST.

Chicago

1902

from Joseph Wharton's report in 1876 in which he claims some small specimens of ore have been found in Ongou that compare favorably with the New Calidonia ore. Since then time - I have sent two car-loads of these specimens to the Orford Copper Co. who are naturally antagonistic to us, and yet who acknowledge they have never received finer ore.

The analysis of this ore I have already sent you.

Please read me your ideas of royalty in making the ore 5% ore, and also above and below that

Established 1865 — Incorporated 1893

Sheets, Dempster & Co.

— Notice to the Trade —

STORE FRONT: EXPRESS 40
FACTORY " " FOUR 507.

Chicago, _____ 1900.

per cent. If you are familiar
with the New California
or you will find this one
practically the same.

Should you
desire to have some of the
low grade as well as
some of the good one sent
you — I can do so.

Hoping to
hear from you soon.

I Remain
Yours Very Truly
J. Hibbard

[ENCLOSURE]

OREGON NICKEL MINES

by
JOSEPH WHARTON
#1#

Extract from the Eighteenth Annual Report of the Survey, 1896-97
Part V- Mineral Resources of the United States, Calendar Year
1896: David T. Day, Chief of Division of Mineral Resources-

In Oregon attempts have been made to organize a Company to develop the nickel-silicate deposits which are disseminated through the hill called Nickel Mountain, but hitherto without practical result. The quantity of nickel in that region is vastly greater than in North Carolina, and some small specimens occur there that are comparable to those of New Caledonia. The nickel is however, too thinly and widely spread over a large district to pay for working while wages are so high and nickel so cheap as now.

[ENCLOSURE]

NORTH CAROLINA NICKEL MINES
by
JOSEPH WHARTON

Extract from the Eighteenth Annual Report of the Survey, 1896-97
Part V- Mineral Resources Of the United States, Calendar Year
1896: David T. Day, Chief of Division of Mineral Resources

The North Carolina Nickel deposits, which were considerably discussed a few years ago, consist in effect of green stains upon such hard mineral as chalcedony, of impregnations in the kaolin into which the abundant feldspar has passed near the surface, and of thin plates of nickel silicate or carbonate in the rock seams. The quantity of nickel in all these forms is so trifling as to be totally devoid of economic value; it is apparently all derived by leaching from the important chrysolite masses which permeate in several places the gneiss of western North Carolina. As this Chrysolite contains but a fraction of 1 per cent of nickel, and yields by leaching or its metasomatized surface but a part of that fraction, while much that is so leached out runs off in the streams, there is obviously but little reason to hope for any workable nickel in this region, either near the surface or below.

LEVI ANKENY, WARRA WARRA
PRESIDENT
F. O. MULLICH, TACOMA
TREASURER
J. J. ANDERSON, ELLAMORE
SECRETARY

L. B. ANDREWS, SEATTLE
W. H. GUTTER, TACOMA
H. D. C. HUGHES, WASH.
HURTON E. BENNETT, SEATTLE
H. L. MERRITT, SEATTLE
H. J. SNIVELY, NORTH YAKIMA
T. R. SCHMIDT, SEATTLE
C. H. THOMPSON, SEATTLE

Washington Headquarters

Pan-American Exposition

May 1 - 1901 - Nov. 1

FRANK LA WALL, TACOMA
ASSOC. SECRETARY

FRANKLIN D. JOHNSON, EVERETT
SECRETARY

*Arrived
Sept 25 1901*

Buffalo, New York, U. S. A., September 7th., 1901

Thomas A. Edison, Esq.,

Orange, N. J.

Dear Sir:--

I handed you a hand sample of nickel ore the first time that
you called at the Washington Mineral Exhibit. You then agreed to have
it tested, see what amount of mineral it contained. Now, if that has
proved satisfactory, I wish you would advise me so that I can look the
matter up farther.

Quite a number of people have already been to see me in regard to
the nickel deposits of the State of Washington but I have not given them
any satisfactory answer on account of the talk that I had with you when
last here; but I would suggest that we go into the matter at once and se-
cure the property from the locator.

The article that you had published in regard to your two new inven-
tions, as to the storage battery where you used nickel and iron, I would
say that it is best for us to go out and secure the nickel properties if
you found the ore satisfactory.

Please advise me by return mail. Or if you would care to have me
call at your place, I could probably get away for a couple or three days
and see you at your laboratory.

Very truly yours,

Franklin D. Johnson
Supt. Washington Mineral Exhibit.

6

Vermillion River Camp.

Sept. 9, 1901.

Dear Mr. Edison.

A report of the work carried on since you left the party in Arkadelphia is as follows.

On Aug. 29 we moved into a camp on the Vermillion River in the southern part of Lot 11, Con. II of Steadman. As it once found considerable difficulty following the contact owing to the confusing nature of the rock. We finally selected a N.E. trend and run a base line extending out each side from the river. The cross lines were 150 feet apart and the readings taken very thickly. The lines were long enough to cover what we thought was possible ground. On the western side the base line ran from the camp in a S.W. direction through Lots 11, Con. II and 11 & 1/2 Con. I. Found small readings, maximum of 9 positions, over two very limited areas.

On the eastern side of the river the base line was a continuation of the line on the western side and ran in a N.W. direction as far as Henry Ranger's claim, in Lot 8 Con. II. Found readings with a maximum of eleven near end of line, which is probably in Ranger's claim. This will be investigated from our new camp.

Which will be in Ranger's claim. ⁽²⁾

The bare tin on the eastern side of the river runs over a rock consisting of quartz, feldspar, mica and hornblende, bearing very much the appearance of diorite and which we finally determined was diorite and ran the cross line accordingly.

While trying to find the line of contact on northern side of this diorite belt we located an attraction of considerable extent in the NE corner of Lot 9, Cor. I of Craigston. We found two localities of strong attraction, 900 feet apart,

on a small hill of quartzite between and wholly surrounded by diorite. Later we ran four lines 100 ft. apart over part of this, covering a length of over 1000 ft. and got such satisfactory readings that we decided to apply for the northern half of Lot 9 without further investigation.

The northern line of contacts we were unable to follow owing to the confusing nature of the rock and accordingly used the old method of survey in following this line of attraction through the adjoining lots to the road. The readings in lots 10 and 11 are sufficiently satisfactory to warrant our applying for same as many of the readings were over 10. There appears to be a NE and SW trend in this attraction and we are accordingly continuing the survey in the lots to the SW and from our next camp will continue to the NE.

There is no evidence of a dyke or along the outcrops such as gossan, but there are small flakes of metallic matter in the diorite.

13)
We shall probably now camp the middle of this week
going to our next one via Andover from where we
shall send you another report.

Yours sincerely-

J. V. Miller.
Capt. M. Chapman.

Thos. C. Gibson
Director of the Bureau
of Mines Toronto -



*Answered
Sept. 14, 1901*

Sept. 10th, 1901.

Maps received for which receive my
thanks. They will be of great aid to me. I have now
Dear Sir:- 12 prospectors at Sudbury next summer will

By Saturday's book post I sent you the following maps:

*but on 24 additional, I think you have a very rich
mineral country -*

1. Province of Ontario showing townships, railways, etc., 1900
2. Province of Ontario, scale 40 miles to the inch.
3. Northwestern Ontario.
4. Lake of the Woods.
5. North shore of Lake Superior.
6. Michipicooton Mining Division.
7. Michipicooton Mining Division, geological.
8. Rainy River district, geological.
9. Manitou section, geological.
10. Lake of the Woods, geological.
11. Rainy River district showing surveyed townships.
12. Sudbury region, geological.
13. Parts of Algoma and Nipissing Districts, geological.
14. Huron and Ottawa territory.
15. Part of Hastings County, geological.
16. Lake Shebandowan section, geological.

By yesterday's mail I sent you a map of the Sudbury nickel
region with lots patented and leased to date marked thereon.

One or two other geological maps of parts of New Ontario
may be had on application to the Geological Survey at Ottawa,
where they are on sale for a small sum. These include the
following sheets:-

French River, Lake Temisaming,

- 2 -

and I think one or two others. From the Geological Survey Department also you may procure a copy of Dr. Bell's map of the Sudbury country issued in 1891, our supply of which has for some time been exhausted.

I shall be glad if you will accept the above maps, and trust your recent visit to the Sudbury nickel region may result in mutual profit to yourself and this Province.

Yours very truly,

James A. Bell

Director.

Thos. A. Edison, Esq.,
Orange, N. J.

John W. Overturf
Manager, Buffalo, N.Y.

received

Central National Bank

Incorporated 1881

Henry A. Overturf
Manager, Buffalo, N.Y.



The Massachusetts Mutual Life Insurance Co.

Springfield, Mass.

F. G. Cross, Cincinnati Manager

for Southern and Central Ohio

J. W. Overturf, General Agent

JOHN W. OVERTURF,

Office in Buffalo, N.Y.

230 1/2 W. AVENUE, WEST,

COLUMBUS, OHIO.

Answered
Sept 16 1901

Thomas A. Edison &

Sept 11 1901

I am in the market
check Orange for a nickel paper
you to be made for me

I am interested in a
on the way to per ton
piece of property that has been
of deposit of nickel
Gold, Copper & Silver. I have
a complete
analysis of the ore & there may be other
valuable in
it. I am informed that the assay shows 8% nickel
a little Copper & from 10 to 15% Gold.

I saw by the Buffalo Paper that you were seeking
a supply of nickel ore. Are you in the market for it
and if satisfactory do you wish to purchase any property
showing a deposit of it.

Yours Truly
John W. Overturf

Nichols-1006



... THE ESMOND HOTEL ...

Cor. Front and Harrison Sts. of OSCAR ANDERSON, Manager.

Answered
Sept 25-1904

Portland, Oregon, Sept 1st 1904

Thos. Edison Esq.
Manila Park N.J.

Dear Sir,

My attention has been called to some articles in the news paper regarding Nickel Ore. I own and control a number of claims of practically inexhaustible deposit of this Ore. If you are in the market for this ore, let me hear from you - please. Kindly inform me the names of the firms using your newly invented motor for automobiles -

Very truly Yours
L. N. Tuttle.

Esmond Hotel
Portland, Ore

Do you refer to the Riddle's
property & those in Douglas Co
The new battery for automobiles
is not yet ready for the
market =

Sandburg, Ind-

Sept. 15, 1901

Mr. T. L. Edison -

Orange, N. J.

Dear Mr. Edison: -

The party arrived here Friday morning.
Having left the camp on the Vermillion River that
morning -

The work since our last report of the 9th is as
follows -

The survey was continued in three lots.

Lower half - lot 11, Concession I Creighton

all " 12 " I "

Northern half " 11 " VI Graham

" " 12 " II "

Southern " " 1 " I Fairbank

" " " 2 " I "

In all of these lots we obtained fairly high read-
ings. We have plotted all of the readings and are
sending you the complete map - with the exception
of lot 9, Concession I of Creighton. We reported on the
work in this lot in our last letter and owing to the
few readings and comparatively small area covered

We have omitted it from the ^{last} large map.

Upon arrival here we applied for the following -

Western half -	Lot 9,	Concession I	Oreginton -
All	" 10,	" I	"
Southern half	" 11,	" I	"
" three quarters	" 12,	" I	"
" quarter	" 13,	" I	Fairbank
" three quarters	" 13,	" I	"
Western half of			
North Western quarter	" 13,	" VI	Seabam
Western three quarters	" 12,	" VI	"

It was necessary to make the applications in the name of different persons, as one person can apply for only 320 acres within a distance of 15 miles.

The names used were T. A. Edison, Wm. T. A. Edison, Mary E. Miller, Ira M. Miller, J. V. Miller. Is the use of these names satisfactory or do you wish the names of members of the Battery Co. used? It might be well to send a list of names you wish used in the future.

The first payment of one quarter of the cost per acre for a lease, or twenty-five cents, is due in sixty days after the application is filed in Toronto. I.

You wish this paid at once ⁽³⁾ or paid until after this investigation is made?

A. D. Libbs of Buffalo, the man whom Chapman spoke to you about, arrived here Friday night and goes with us tomorrow.

The balance in the bank here amounts at present to \$49.58. Several bills will be payable at end of month and it would be well to send another letter of credit before then.

We have corresponded with Thomas Drew, but as he is still awaiting his partner, we have not met him nor made any definite arrangements to visit his prospect in Hill.

Tomorrow morning we start out again, going to Hung Ranger claim in lots 3 and 4, Concession II in Snyder -

Yours sincerely
J. V. Miller
Clayton M. Chapman.

Mr Randolph this is
furnished, gave it to Demmold to
ship

I sent one Glond Magnet
and Key and 4 way Switch
and putty 10 feet $\frac{3}{16}$ rope 20 feet
flexible Battery cord

4 L cells of Lalonde Battery
with 3 renewals for each cell

Sep 15 1901

J. P. Ott.

[ATTACHMENT]

Randolph answer that
I will start making one at once
to please say what he wants it
Edison

DEPARTMENT OF THE INTERIOR
 UNITED STATES GEOLOGICAL SURVEY
 WASHINGTON, D. C.

IN REPLY PLEASE REFER
 TO
 AND DATE OF THIS LETTER

Address all communications to
 "Director, U. S. Geological Survey,
 Washington, D. C."

Buffalo September 6th, 1901.

SUBJECT:
 MH/D.

Mr. Thomas A. Edison,
 Orange, N. J.

Dear Sir:

I am about to start for San Francisco and
 Northern California looking for additional supplies of
 cesium, and also to visit a nickel mine in Northern
 California, the location of which is known only to me.

For this purpose I want to take with me a
 small compact magnetic separator. Would prefer to have
 it adjustable so as to separate two or three different
 degrees of magnetic material. Have you one that you can
 promptly lend me, small enough to get in a box not
 larger than a trunk of ordinary size?

very truly yours,

David S. Day
 Chief of Division.

Magnet - have 62 single pole, each in diameter
5 inches long - have small switch to
throw in 1 2 3 or 4 G. batteries
whole packed in case with several
renewals - battery the strongest sig. demand

Shipped Sept 16-1901

John alt -
Please make a. 11 found
magnet to work with
4 small cells demand

nickel: 1000
 ..THE..
 CLEVELAND-ARIZONA COPPER CO.
 MINES AT
 AJO, PIMA COUNTY, ARIZONA.
 CLEVELAND OFFICE, 1113 WILLIAMSON BUILDING.

*file nickel
 down stream*

OFFICERS:
 GEORGE L. HALSTON, President,
 JAMES D. MACKEY, Vice President,
 THOMAS E. HOOR, Treasurer,
 FRANK W. WOOD, Secretary.

CLEVELAND, O. *Sept. 18th* 1901

Thomas A. Edison
 Llewellyn Park.
 Orange, N.J.
 Dear Sir: I am as yet only investigating
 the Sudbury district having
 a few men up there, perhaps
 I may do something or may avail
 myself of your services.
 Having noticed in a recent
 number of The E. M. ~~Journal~~ an account
 of your visit at Sudbury, Ont. I take
 the liberty to ask if you are in the
 market to buy copper-nickel properties?
 I was actively engaged for five years, with
 the Canadian Copper Co. in the development
 of their extensive properties at Sudbury
 and have a thorough knowledge of the
 resources of that region. If my services
 can be made available in investigating
 desirable properties, there or elsewhere,
 in your interests, I would be pleased
 to enter into an arrangement with you
 to this effect. I have pleasant
 recollections of three days spent at your
 laboratories, thirty years ago, at the
 time when you were engaged in making

..THE..
CLEVELAND-ARIZONA COPPER CO.
MINING AND
AJCO, PIMA COUNTY, ARIZONA.
CLEVELAND OFFICE, 1123 WILLIAMSON BUILDING.

OFFICERS.
GEORGE E. HALESTON, President.
JAMES D. HALESTON, Vice President.
TITMAN B. HODGE, Secretary.
FRANK W. WOOD, Treasurer.

CLEVELAND, O. _____ 190__

Experiments, on magnetic separation of
pyrrhotite from chalcopyrite, using Sullivan
ores. I have no interests in mining
properties nor am I the owner of mining
property, having tried aloof from entering
into speculation in mining property.
But I believe my knowledge and
intimate association and experience,
at Sullivan, dating from the very
beginning of operations there, would be
valuable to such parties as may be seeking
richer prospects.
I would be pleased to hear from you.

Very truly yours
Francis F. Curry
Sullivan, Ohio
Summit Co.

CLARKE & CO.
Mines, Mining Stocks
and Investment Securities.
MEMBERS TORONTO MINING EXCHANGE
O'LOUGHS AND MOREING & NEAL'S ODDER

TELEPHONE NO. 2264

OFFICE: 75 YONGE STREET
JAMES BUILDING

Answered Sept 20-1901
Toronto, Sept. 18th, 1901.

Thank the Nickel in Sudbury
Thomas A. Edison, Esq., Please describe the nature & extent
Orange, N.J. of the showing on outcrop -
Dear Sir:- I am not thinking much of the Northern
Range but still will not pass a
We have been for some time very much interested in
Sudbury Nickel Copper district and our Mr. C. met you in
Sudbury last August. Edison

We have for sale six half sections 4 to 8 miles from
the main line C.P.R., we will let go for \$15. per acre, Crown
granted - Some we have less but all undeveloped. There are
splendid shows on some of them. Out Mr. C. would go up to
Sudbury and show same to your man if you thought of doing any-
thing - We will let them go closer to the "ground floor,"
than any one else. In fact we think cheaper than you can
prospect as it is uncertain. They are in Morgan Township
in the North range and were taken up a year ago.

Kindly let us hear from you. If there do not suit
we have others.

Very truly yours,

Clarke & Co

Long Distance Telephone Connections

Cable Address, Springfield, N.H.

*Original is
Sept. 20, 1901*
Eppinger & Russell Company
MANUFACTURERS & SHIPPERS OF

Yellow Pine Lumber & Timber

CREOSOTING WORKS
FOOT & FIRST ST.
NEWTOWN CREEK
LONG ISLAND CITY

Morris Building, 65 Broad St.

New York

Sept. 20, 1901

Please name location

of property = I have

visited nearly every deposit

in Sudbury district

Thomas A. Edison, Esq.,

Orange, N.J.

Dear Sir:-

Some years ago I had the pleasure of an interview with you relative to the Sudbury, Ont. Nickel Ore and at your request sent you a small sample lot for experimental purposes, resulting in my receiving a letter from you to the effect that you found the ore the most adaptable for your process of any you had received at that time. If you are in any way interested, I should be pleased to call upon you at any time you may elect. I am the sole owner of these properties and am prepared to make a reasonable arrangement with you that I am satisfied will be mutually advantageous.

The location of the property is everything that could be desired, having railroad communication right at its door, plenty of timber, good water and every facility for economical mining.

Yours very truly,

E. N. Davis

*Delivers
for two weeks
Cadillac Hotel
43 West 43rd Street
New York City*

*of E. N. Davis Sons
Montreal
Canada*

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
DIVISION OF MINING AND MINERAL RESOURCES

*Answered
Oct. 14, 1901*
Mr. Thomas A. Edison,

Orange, N. J.

file Michel box
Denver, Colo. Sept. 23, 1901.

Lab
My Dear Sir:-

You will be glad to learn that I have just been advised by my personal friend, Mr. Richard A. Parker, #4, P.O. Square, Boston, Mass., that he has been examining a property in South Eastern Nevada on which he has found 2-6/10 % of nickel, 7-3/10 % of copper and 1/2 oz. of platinum to the ton. The brief description of this deposit leaves me in doubt as to whether he thinks it is large enough for your purposes or not, but I feel sure that you are justified in writing to Mr. Parker about it, and you may use my name in that connection.

Hoping that there is a possibility here of getting you just what you want, I am,

Yours very truly,

David J. Day

[ATTACHMENT]

Mr Richard A Parker

104 PO Square Boston

Dear Sir

Mr David J Day has

informed me that you have been

Examining a Copper deposit
in S E Nevada containing considerable
Nickel - I am very much interested

in Nickel & would ~~you~~ be very
thankful if you could give
me briefly a little data as to
this deposit - Character of
ore etc

Yours
Thos A E

Edison Camp.

Sept. 24, 1901

T. A. Edison

Orange, N. J.

Dear Mr. Edison: —

Your letter of record date at hand.
In the future we shall send you more detailed information as to the trend of the rock and their character and also samples. He received the glasses with the two dip needles but not the clips. In regard to the attractions on the map and form of the ground in Crigston we were in doubt ourselves as to the cause of same, as there were no indications of nickel ore on the surface, except the small spots of iron stain & small scattered specks of sulphides in the diorite. Have been notified by the Ontario Bank in Sudbury of the receipt of the \$500.

Since our last report of Sept. 17 we have surveyed the following ground —

Reynolds' claims in Lots 3 & 4, Concession IV of Snyder.

" " " " 7 " III "

" " " " 8 " III "

All of Lot 4, Concession V of Snyder —

Eastern part of Lot 3, " " "

(2)

We enclose maps of all of these -

In to 3 & 4, Con I we found the conditions very much the same as in Cicigtoles. That is there are outcrops of granite entirely surrounded by diorite, there are high attractions pretty much scattered over entire area and very little surface indications. As the cause of these attractions is so doubtful and we have already taken up considerable ground of this character and as Ranger is of the opinion that there is very little nickel here, if there is pyrrhotite, we have decided to abandon, for the present such ground and move to that generally considered likely -

We are sending you samples of the diorite and granite from the northern portions of to 3 & 4, Con. I, where the high attractions are shown on the map. The outcrops of granite found in the diorite are mostly of a quartzite nature and have no special stand being merely bosses projecting through the diorite. The true granite contact is farther north and a lake prevented us from continuing the line over it. Some of the northern most lines however cross it. Its trend is about NE and SW.

(3)

In Ranger's claim ^{see} Lots 3 & 4, Con. II and 7, Con. III. The base line followed the line of contact between granite on the south and diorite on the north, which was quite easily followed. In the former two lots the line of contact was curved from a N & S direction, to E & W and finally N & S again, making a semi-circle through the four claims - starting at SW corner and ending SE corner of the group. In the map we have plotted this base line as straight, with a small sketch of the general trend of the base & cross lines. We took samples in several places along the contact where there were claims which are merely on the surface and are the only indications of ore. There are no prospects openings at all.

In Lot 7, Con. III. The contact is a conglomerate containing some of that very greenish diorite and having much better indications of ore in several places. There was no general gossan but only narrow seams and pockets of deeply stained rock, carrying a small percentage of pyrite. We are sending a general sample from this claim.

(4)
This is on the same line of contact as the Tenn.
O'Shanter, North Star and Ranger's claims, in Lot
8, Con. III.

In Lot 8, Con. III we crossed the Indian claim,
the base line being its northern boundary, the
line of contact being about east and west in
the northern portion. Here there is a shaft, 35 ft
deep, which is now being pumped out and
from which, when dry, we shall send samples.

Ranger & McCormick wish to know whether
you will take a half interest in their claims
in Lots 3 & 4, Con. IV of Snyder, as McCormick
says you told him you might do. They are
very anxious to have the matter settled as soon
as possible as other parties are pushing their
applications for same. You doubtless know
that only the first quarter has been paid on
the two eastern most claims.

Tomorrow we move our camp to the S.W. cor-
ner of this township and propose surveying
the probable ground in this locality - and
then on to Ranger's Claims in Graham.

(15)
He decided it was best to let Bayles return
to Orange as he was quite dissatisfied with
the work. His place is filled by Gibbs and
as we are kept busy laying out work for the
firm, we did not send for another man -

We need, as yet, from Drew - and above
all, the blue berries are all gone - and conse-
quently the further forwardness of mine is very doubt-
ful.

Yours sincerely -

John V. Miller -

Lloyd M. Chapman

The Dominion Mineral Company.

3 Seymour Avenue,

Montreal Sept. 24th, 1891.

If you were as thoroughly
informed regarding the

Thomas A. Edison Esq.,

Orange, N. J.

Dear Sir,-

Worthington properties in respect
to cost of working as compared with
other mines you would not make
Your letter of the 16th instant came duly to hand, and
has been carefully considered. For a high grade property like the
"Worthington", being developed and in a position for operations to
be commenced at any moment, and situated so conveniently to the
railway, the bases for \$1000 Royalty you mention could not be en-
tertained by us.

*I am not going to negotiate
if you are prepared to make us an offer, taking into con-
sideration the merits of the Ore, and situation of the "Worthington",
we are disposed to give it serious consideration; in order to save
time and unnecessary correspondence, I am directed to ask you to
quote the maximum Royalty you are prepared to offer so that we may
give you a definite reply. We should require a minimum of Ore
taken out from the "Worthington" of 30,000 tons per annum.*

Awaiting your favourable reply,

Yours very truly,

Wm. L. Cuddy
Pres.

*Received
Apr 30 1901*

Nickel-lands

Mr. RUDEBECK,
Real Estate
and Mining Broker
3201 1/2 Everett Ave.
EVERETT, - WASH.

*The sample you gave me is
all right but is very low grade.
The grade above should be high. To make
Everett, Wash., Sept. 24, 1901*

Thos. A. Edison,
Orange, N. J.

Dear Sir:-

*it pay = When you are out prospecting
get samples & full descriptions*

I am now home from Buffalo and am ready to start out on my prospecting trip for Nickel ore. You advise me as to the amount of a hand sample you would want from each property. In your letter of Sept. 8th you say that the sample you procured from me at Buffalo is all right. My first trip into the Hills will be to examine this property and I will report to you on my return from the Hills.

Very truly yours,

Edison
Th. Rudebeck

*Answered
Sept 30 1901*

No. 2

To T. A. E.

DATE _____

you all information in my possession regarding the properties and I believe we could satisfactorily arrange for your purchasing them or securing a working option at a nominal price for a term of years that I think would be profitable to you. I am the sole owner of these properties and I am not in a position to carry on mining operations. If I were, I would not sell any of these properties as my experience satisfied me that it takes a mine to work one."

If you cannot afford me the time for a personal interview, I will send you the map giving you the township, number of lot, etc., but I would much prefer your granting my request.

Yours very truly,

E. A. Davis

*%
Cadillac Hotel.
43rd St & Bway.*

Desiring ¹⁹²¹ Sept 27
Thomas C. Collier Esq.
Windsorbury Ont.

Being a subscriber
of the family Imperial Journal
a statement of your inter-
-prise considering prospects
the far Imperial for better
abstract of your Imperial
your service as a first-
class prospectus understand
the transient through I have
discovered a number of good
Imperial prospects and
first class fine good prospects
for sale in a nickle
I have sold I believe if you
want to be a good man
more than the one
cheap magnified are 75 per cent
2 miles from Windsor

(2) two four foot dunes
and lots of smaller ones
also one (2) twelve foot
dune this is the property
Chas. Considine Bay
Whitman as a prospectus
you can sign on to the
Canada Imperial when
Mr. Richard Tully there I
have sold number of noble
prospects is around twelve
and these are and good
about 25 per cent in that time
this is a fine prospectus
copy faithfully yours
John Moore Esq.

Direct-
John Moore Esq.
Wesleyan
Prov. J. Lumber

[ATTACHMENT]

John Moore Senior -

Des Moines, I. S. —

If you have any nickel
properties describe kind of
ore & location & what you
want —

Yrs. Edson

Sudbury - Ont -

Sept. 29, 1901 -

Mr. T. A. Edison -

Orange, N. J. -

Dear Mr. Edison -

Enclosed you will find the account
of expenses of the surveying party for the months
of August & September together with the vouchers
for the expenditures -

I am sending you by express tomorrow the
following samples -

- #1 - Rangers Claim, Snyder Lot 4, Con. IV S.E. of stake #7
- #2 - " " " " " At stake #13
- #3 - " " " " " General sample near stake #13
- #4 - " " " Lot 3, " S.W. of stake #35
- #5 - " " " " " N " " #45
- #6 - " " " Lot 7, Con. III - General sample of prospects
- #7 - Snyder - Lots 3 & 4 - Con. IV -
General sample diorite and granite taken over an area
of high attraction
- #8 - Rangers Claim, Snyder Lot 8, Con. III -
From shaft - 32' below surface -

- #9 - Rangers Claim - Snyder - Lot 8, Con. III
 Samples from surface near shaft -
- #10 - Rangers Claim - Snyder - Lot 8 Con. III -
 Samples along contact through claim -
- #11 - Rangers claim - Snyder - Lot 8, Con. III -
 Scrapings from bottom of shaft -

These samples are mostly from outcrops of stained rock along the line of contact. The shaft in Lot 8, Con. III is about in the middle of Rangers Claim and is 35 feet deep. A party went over to run this shaft and the claim with the expectation of taking it up, so the rumor goes -

Hoping every thing here is satisfactory to you -
 I am -

Yours -
 John V. Miller -

Mills & Co.

General Agents

REAL ESTATE,
MINING, ETC.

830 MAIN STREET

Answered
Oct 8/1901

Winnipeg, Sep 20th 1901

Mr Thos A Edison

West Orange. N. J.
U.S.A

Dear Sir-

I herewith enclose the list of assays mentioned in my letter this morning. Leaving it out was an oversight for which I am sorry -

Yours truly,

Geo. C. Mills -

% above firm

Say I am in the market for a nickel mine to be worked on a royalty basis per ton with a guaranteed minimum sum per year - I have already several propositions in the Sudbury district under consideration - If you have any applicable send description *E*

[ENCLOSURE]

Hills & Co.

General Agents

REAL ESTATE,
MINING, ETC.

530 MAIN STREET

Winnipeg, Sept 20th 1901

list

Assays

March 5th./02. N. Lehon, Ph.D. St. Paul, Nickel 15 1/2 %.

Aug. 21st./03. Geo. Melvin, Wp'g. Gov. H.E. & Analyst. , 15 %.

Sept. 23rd./03. Worlds Col. Exp. Chicago. 2 samples, , 1.54% & 2.05%

Sept. 5th./03. N. Lehon, St. Paul, Gold \$22.00. Silver \$3.10. Total \$25.10.

Sept. 21st./06. D. John, Rat Portage, , \$22.00 , \$1.50 , \$23.50

Oct. 28th./06. N. Lehon, St. Paul. Iron Pyrites, Gold \$5.00

Nov. 24th./06. N. Lehon, St. Paul, Copper 1 1/2 % Nickel 4 3/4 %.

Dec. 5th./06. Henry & Great, Winnipeg, Gold \$20.00 Silver \$27.00

Dec. 10th./06. C. R. DeForest, Denver, Col. , \$23.05 , a trace.

July 4th./08. E. B. Young, Winnipeg, Copper 4.24 %.

Mar. 27th./07. D. John, Rat Portage, Nickel 2.81 % Copper 1.85 % and
Platinum .02 oz.

.....

Proprietor, Nickel

PROPRIETOR,
JOSEPH WHARTON,
Post Office Address,
BOX 1282, PHILADELPHIA.

AMERICAN NICKEL WORKS,

Camden, N. J.,

Oct 4 - 1901

OCT. 5 1901

Mrs. Edgman, 1100 1/2
Leukemia

3" inch me do (not)
understand what you
take an by slag such as
used in smelting
position.

Awaiting
information.
Sincerely,
Joseph Wharton
W. H. H. H.

Write to ~~Wharton~~ Miller
at Sudbury & ask him next
time he is in Sudbury to
send 3 lbs of black
slag from Waste furnace
E

Edison Camp VII

Oct. 5, 1901.

Mr. Thomas A. Edison -

Orange, N. J. -

Dear Mr. Edison: -

Your letter of Sept. 30 at hand. In answer to your question would say that - For our own convenience for determining localities of high attractions we underlined all readings above plus 5 and under minus 5 - and in regard to the plus sign - the readings followed by a plus sign indicate that the needle went to the stop, showing that the true reading would have been higher had the stop been removed. We moved our camp on Sept. 25 to the northern half of Lot 8, Con. III of Waters and immediately

started a base line along the northern contact, which runs in a north easterly direction. The base line started about the middle of the western boundary of Lot 7, Con. II and passed NE. close to the NE corner of the same lot, through lots 6 and 5 Con. I of Snyder, to the NE corner of Lot 5, Con. I, thence ^(and on contact) east along southern boundary of Lot 4, Con. II to the SE corner of this lot. On the whole the contact is about as shown on the map - except for its running farther north towards the eastern end of our base line. Starting the line between lots 3 & 4 Con. III, about one third of a mile north of the SE corner of

Lot 7. But the contact is variable in direction and much more broken towards the east, becoming quite wide - i.e. mixed patches of diorite and granite and conglomerate. The character of the rock you can see from the samples we are sending. Little or no stain was observed but some of the diorite was slightly mineralized.

There were only the small areas of high attraction, namely on lines #51 and #53. That on #51 was on a small spur of diorite extending into the granite. The effect on the attraction due to polarization was tried at one point giving a reading of 90, within a few inches of the surface, and of 40, about six feet directly above

That on #53 was over conglomerate, with no large body of granite in the immediate vicinity. The conglomerate contained considerable of that very greenish diorite, such as you noticed at Washington and other places. A test of elevation was made here and resulted similarly to that on line #51. No stain was evident on the surface. Detailed surveys of these localities and samples here being sent. We propose applying for the northern half of Lot 15, Con. I of Snyder which includes both these areas.

On Lot 7, Con. I of Waters, which is a farm belonging to R. M. Trist, Victoria Mine, he found an area of high attraction, on line #3w,

shown also on detail survey map. About 1000 ft S from this there was an outcrop of discrete considerably stained and giving quite high attractions. Sample of this we are sending also a small sample given us by Tristi's farmer and said to be from another farm to the South belonging to Nicholas Roe, which we could not reach. We expect more information from Tristi shortly in regard to his property.

We moved to this camp, Loc 5, Con. I, of Brighton on Thursday, Oct. 3rd from where we shall make a survey of Ransgrove's claims in Graham. Bad weather has prevented work here, this week, having a heavy snow storm yesterday

and rain mood of today. The week has been generally stormy but the general opinion is that there will be a month or so yet of good weather when this bad spell is over.

Frank Bolitto gave out a couple of days ago and seemed to be feeling pretty badly as we send him to St. Louis. Considering his general constitution however we have decided that he had better return to the States. Accordingly we have telegraphed you for another man.

A list of the samples sent you today is as follows -

#12 Snyder. Loc 5 Con. I
Locality of high attraction on
Line #514

#13 Gratus - Lot 7, Con. V
Trist's Farm -
Locality of high attraction on Lm. #3W

#14 Gratus - Lot 7, Con. V
Outcrop on Trist's Farm.

#15 Snyder Lot 5, Con. I
Locality of high attraction -
570' E of stake #53

#16 Nicholas Roe's Farm - in Gratus -
Specimen from outcrop.

Yours very sincerely -

John V. Miller -
Cloyd M. Chapman

Long Distance Telephone Connections

Fuller Station, Springfield, New York

Eppinger and Russell Company
MANUFACTURERS & SHIPPERS OF

Yellow Pine Lumber & Timbers

CREOSOTING WORKS
FOOT & FIRST ST.
NEWTOWN CREEK
LONG ISLAND CITY.

Answered
Oct. 14 1901 *Harris Building, 66 Broad St.*
New York Oct. 9, 1901

Thomas A. Edison, Esq.,
Orange, N.J.

Dear Sir:-

Agreeable to your request, as per favor of the 8th inst., I enclose herewith maps showing the location of properties in Hyman and Nairn Townships. I also enclose list giving the acreage of the different lots as marked on the maps.

It has been ^{last} reported to me that a Lumber Co. is operating in Hyman Township and diverted the water above one of my properties, but I have not had this report verified. These are all the properties that I own and I am desirous of closing them out. If a deal can be made at an early date you will be enabled to purchase them at a very reasonable figure and not at mine prices. I have had an offer made to me by a wealthy corporation to do work upon them at their expense, subject to purchase at a price to be mutually agreed upon. This I have declined, inasmuch as I do not care to tie up the property, being desirous, as I have stated, to close them ~~out~~.

I trust I may hear from you at an early date regarding them and that you will be able to afford me an interview. I also enclose a map of the Clergue Syndicate which they are distributing.

Yours very truly,

E. A. Harris

[ATTACHMENT]

E.H. Davis -

Can ~~you~~ give me any data
as to position on the lots
of the nickel prospects
so my men can examine
them - we have gone over
lots of property up there
said to have nickel but
not even a prospect was
found & I would not like
to do much more of this
kind of work - if you can give us
the positions of some and generally
Extent

DEALERS IN MINING CLAIMS.

RATH, ~~Woodcock~~ & C^o.

PROSPECTORS

THE CARIBOU MICA MINES

Loring P.O., Ont.

Oct. 10. 1901.

Thomas A. Edison Esq.
Manitowish Park N.Y.

Esteemed Sir:

Kindly
pardon me for addressing you
but many years ago I had the
pleasure of meeting you.

I have been informed, that
you are interested in our Nickel
and Copper deposits in the Sud-
bury Nickel and Copper belt.

Over my 3 years of prospecting South
of Sudbury and French River I have
traced said Mineral belt from
Sudbury to Parry Sound, which has
almost the shape of a Cornucopia.
The widest extent of the Horn at
Sudbury down to Lake Nipissing
and French River, narrowing
down and pointing to a point
in southwesterly direction to Parry
Sound and disappearing under
the Georgian Bay.

DEALERS IN MINING CLAIMS.

I.

RATH, ~~W. C. DOCK~~ & C.

PROSPECTORS.

THE CARIBOU MICA MINES.

38

Loring P.O., Ont.,

490

I have discovered and secured some valuable claims amounting to over 600 acres on this belt near the French River and Georgian Bay and have options on about 2000 acres more.

The percentage of the ore is about the same as the Sudbury ore, with in some places a high percentage of Platinum.

The deposits are easy of access by water and rail, Waterpowers, fine timber for every purpose and limestone at hand.

My locations are situated in the Township of Mc Donkey on Carrillon Lake in the Township of Hardy, Nelson and Mills, a half a dozen Townships however have not been closely prospected by us.

By turning pages 169, 170 and 171 in the report of the Bureau of Mines of the Prov. of Ontario (1900) you will have a very conservative

DEALERS IN MINING CLAIMS.

III. RATH. ~~WOODCOCK~~ & C.

PROSPECTORS.

THE CARIBOU MICA MINES.

Loring P. O., Ont., 190

report of some of my locations made by Prof. Coleman in my behalf, the examination however was made in Febr with 3 feet of snow on the ground it was impossible for the Prof. to obtain a fair sample at that time.

On the past year I have done more development work and can show better results and the deeper I go down the ore becomes more compact and finer grained and not unlike the Guldberg specimen East of a well known New York Mining Engineer examined my locations and reported very favorable.

My proposition is to turn over to you or Company my claims and interest in other claims and facilitate the buying of other claims and interests for a certain amount of stock or money you or your associates deem reasonable after a thorough examination by your

DEALERS IN Mining Claims.

IV. RATH. ~~WOODCOCK~~ & C.

PROSPECTORS.

THE CARIBOU MICA MINES.



Loring N. O., Ont., 190

Engineers. Timm are dull here
and men holding claims would
sell almost for anything. A report
that the proposed Railroad from
Parry Sound to Sudbury will not
be built next year has discoura-
ged the people in here greatly.

By buying on the quiet now a
boom as there was here several
years ago could be avoided.

By erecting a smelter on a central
located point on the Georgian Bay
say Pung Inlet or French River
all the low grade ores of the
Nipissing, Temiscaming and Parry
Sound Districts could be reduced
at low cost and the product
shipped by water.

Dear Sir I herewith extend to
you or a representative gentleman
an invitation to come up to our
beautiful and rich country and
I will give you convincing proof
of the viability of my plan in

DEALERS IN MINING CLAIMS.

RATH. ~~WOODCOCK~~ & C.

PROSPECTORS.

36

THE CARIBOU MICA MINES.

Loring P. O., Ont., 190

turning our natural resources
in such channels, by which the
production of Nickel Steel now
almost indispensable in many
industries the cost of can be great-
ly reduced.

I am well known to Mr. T. W.
Gibson Director of the Bureau of
Mines and Prof. Coleman of the
School of Science Toronto.

My New York representative is Mr.
Eugene Miller of the law firm of
Miller, Miller & Decker 120 Broad-
way or Mr. W. D. Boggs Secretary
& Treasurer of the Manhattan Beach
& Terra Cotta Co. Harlem. Mr. Gilbert
Gaul the famous American Artist
is my personal friend and he has
also some interests in some claims
I picked out for him.

If my proposition should impress
you favorable kindly answer at
your earliest convenience and
I will send you maps, samples

reports etc.

I also extend a hearty invitation
to our unsurpassed hunting grounds
for deer, moose and bear to any
number of gentlemen you can
induce to visit us. I have several
camps on our many lakes.
Take the Gr. Tr. R. at Toronto
going north to Trout Creek Station
take Stage 42 Miles inland to
Loring, which you will find on
Rand Mc Nally Map midway
between Parry Sound and Ind-
bury South of French River
I have good accommodation.

Hoping to hear from you

I have the Honor to be Sir

your obedient servant

William G. Rath & Co.

Loring P.O.

Parry Sound Distr.
Canada. Ontario

[ATTACHMENT]

Wm. F. Rath C.E.

Dear Sir

Yours of Oct 10th
Recd. I have had 12 prospectors
in the Sudbury district for the
past 2 weeks & they have found
quite a number of prospects. They
will continue there until the middle
of November or until stopped by
the weather. So I will be unable
to send them to see your prospects.

~~As for the prospectors in
the Sudbury district~~
Send maps, locations & samples
it will facilitate matters
should circumstances permit &

2

might possibly send an expert
this fall but I will
certainly have them examined
next summer. ~~Yours~~

~~at least~~ Reserve work
samples so they can be identified
when needed

J. W.

J. A. E.

nickel property
Established 1885 — Surreptitiously 1891
Sweet, Drumpski & Co.
Manufacturers of Nickel
Chicago, Ill.

Mr. Thomas Edison
Orange, N. J.

Dear Sir,

I am in receipt
of a letter from your man
at the mine saying he
has shipped you 3 casks
of nickel ore. Taking from
different parts of the
mine and also numbered
so that you can keep your
record of the ore by the
numbers. This ore is
all taken from the property
formerly owned by the
International Nickel Co.
In writing you before I
think I spoke of the

Established 1885 — Surreptitiously 1891
Sweet, Drumpski & Co.
Manufacturers of Nickel
Chicago, Ill.

STORE PHONE: EXPRESS 48
FACTORY " MAIN 5107

Chicago, Ill. 190

property as the Oregon
Nickel Mines. There is
a Co. by that name of
which I have at present
control of as well as the
Old International now
the American Nickel Co.
the latter of which I
am president.

The Mr. Miller
charge of the Oregon mine
at Reelfoot claims to be
the one to inherit you in
our property. If you can
to arrange the kind of
a deal you spoke of in
your letter to me I leave
bring it about if any
one can - but you are

Established 1865 — Incorporated 1891.

Sheet, Dempster & Co.

Manufacturers of

STREET PHONE: EXPRESS 45.

FACSIMILE: MAIN 3127

Chicago: 190

away too many cooks
spoil the broth

Upon receipt
of the one will you kindly
let me know how it
pleases you.

And Oblige

Yours Very Truly,

J. A. Davis, Secy.

Copy of Letter

Orange N.J. Oct 14-1901.

J. C. Ryan Esq-
Kearso
P. O.

Dear Sir:-

Will you kindly let me know if you
would lease your mineral rights on a royalty of
fifty cents per ton for each ton of smelting ore mined,
with a minimum guarantee of two thousand dollars
per year and option to purchase, if so I
will send my men who are now at Sudbury
and examine the prospect.

Yours truly
Pho A Edsall

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
DIVISION OF MINING AND MINERAL RESOURCES

Portland, Oregon, October 15, 1901.

Mr. Thomas A. Edison,
Orange, New Jersey.

Dear Sir:-

Beg to acknowledge your letter of September 25th, and to say that the separator was duly received; and at this date I am prepared to advise you that it is well worth while for you to take advantage of the next two months, which will probably be fairly dry in Southern Oregon, to do some prospecting in regard to the occurrence of Josephinite, which occurs to a considerable extent in decomposed serpentine in Josephine County, ^{Oregon} near Kerby. The best guide for this work will be Prof. W. H. Hampton, Mining Engineer, whose address is Placer, Oregon. Placer is a small village near Grants Pass.

As indicated to you when in Buffalo, I have also found another placer deposit of pebbles of iron and nickel alloyed together in the metallic state, near Smith River. But I will give you the exact address in regard to this when I return in a few days. Meantime, I would say that your prospectors, should they visit this country and wish to examine this new deposit at once, should continue on the wagon road which leads from Grants Pass, Oregon, through to Kerby and Waldo, on over the divide into California, past Gasquet, on to "Murphys", where one of Mrs. Murphy's boys will take your representative direct to this deposit.

Confidentially, there is another deposit of nickel in

T.A.R.-2-

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
DIVISION OF MINING AND MINERAL RESOURCES

(or perhaps pyrrhotite)
chalcopyrite, quite similar, apparently, to the Sudbury deposit of Canada. This deposit is known as the "Key West Mine" and is located 125 miles about south of Modena, Utah, but over the line in Nevada. It is eleven miles east of the Virgin River and not very far ^(12 miles) from Bunkerville. I will have a set of specimens of the ore in my office in Washington for your investigation when I return. I have not been able to visit this deposit for lack of time. The deposit has been fairly well sampled and shows to contain about 2-1/2 % of nickel on the average, and 7 1/2 percent copper.

I recommended to the Mining Engineer in charge that he call it to your attention, and he states in reply that he thinks it better to wait until the property is in the hands of a stock company. It is now in the hands of five gentlemen whose names I do not know. I think for your purposes it would be better for you to investigate it now, rather than after a stock company had been formed. The first step to take in investigating would be to send a representative of yourself to the spot.

Yours very truly,

Arthur D. Day

Nickel ions

Richard A. Parker,
Consulting Mining Engineer.

Mine Examinations and Management.

4 Post-Office Square,
8 Congress Street.

Cable Address—Ridgwick.
(Metallurgic Code.)

File Nickel in History
Boston, Oct. 16, 1901

Thomas A. Edison, Esq.,
Orange, N. J.

Dear Sir:-

I am in receipt of your favor of the 14th. inst. and in reply beg to state that there may be some slight misunderstanding as between Mr. Day and myself, relative to the amount of nickel contained in the ore about which I have written him.

The following analyses have been taken from the property and may fairly be taken to represent the ore body upon the 200 foot level:--sample No.1 representing about 13 feet of ore in a 15 foot ore body, the other 2 feet being barren material cutting diagonally across the ore lens. Sample No.2 is from drillings taken from the face from the same level and represent about 4 feet of ore in addition to the development on that level, laterally.

<u>No.1</u>	<u>Gold</u>	<u>Silver</u>	<u>Nickel</u>	<u>Copper</u>	<u>Platinum</u>
	Trace	.5 oz.	2.6%	7.3%	.5 oz.
<u>No.2.</u>	Trace	.59 oz.	2.5%	5.5%	.53 oz.

The foregoing assays were made by Messrs Le Dux & Co. of New York.

Upon a level 70 feet from the surface a cross cut was run somewhat diagonally across the ore body for a distance of 33 feet. I would assume that a section directly across the ore lens would show about 20 feet of ore. The material was considerably oxidized and physically did not resemble the development upon the 200 foot level.

T. A. B. #2

<u>No. 3</u>	<u>Gold</u>	<u>Silver</u>	<u>Nickel</u>	<u>Copper</u>	<u>Platinum</u>
Trace		1.4 oz.	1.6%	4.65%	.35 oz.

I think the ore in quantity could be mined below the oxidized region having a general analyses of copper 4.3%, Nickel-2.5%, platinum-.5 oz. and silver 1 oz.

From the foregoing analyses you will see that the nickel contents is not much in excess of that found in the Sudbury deposits of Canada, with which I am quite sure you are very well acquainted.

The peculiarity of this mine consists not in its copper-nickel values, but in the occurrence of platinum as an ore, which is unique, and so far as I am aware, hitherto unrecorded. The mine is developed by a shaft 70 feet deep, an inclined shaft and winze 140 feet deep and a working shaft 200 feet deep; connection has been made between the latter and the inclined shaft largely in ore.

A fire recently burned the head frame of the working-shaft, and no development has taken place for the past six weeks.

A full face of ore was found upon the east drift of the 200 foot level when underground work ceased.

The ore occurs in a fissured zone of gneiss, which is 280 feet wide; values are confined to lenses of diabase in the fissured zone.

The Union Pacific Railroad has surveyed its line to within 22 miles of the Virgin River, which lies about 12 miles west of the mine; the country is practically level between the railroad and the river, and the mine is at an elevation of about 2000 feet above the river. Sen. Wm. A. Clark of Montana is also planning to build a rail-

T. A. R. #3

road which will connect Salt Lake and Los Angeles, which will pass as close, if not closer, than the line of the Union Pacific. The important item of fuel therefore will be largely cared for by the supply of oil to be had from southern California.

Apart from the Nevada mine, I might say that I have been recently offered a large tract of land in Canada, reported to contain 2% of nickel, and about the same amount of copper. I felt however that the nickel business was so well controlled by the Orford Copper & Nickel Co. of New York and Messrs Johnson, Mathey & Co. of London (who I understand can furnish all the nickel to supply the World's demands) that it would be unwise for me to advise my clients to take up a field which is so well filled. The conditions however, surrounding the Nevada mine are quite different, inasmuch as the percentage of copper is greater there, with at least \$10. per ton value for the platinum, together with the possibilities of increasing the value for the latter metal, owing to the difficulty of obtaining new supplies and the destruction of the metal in use.

Any further data that you might care for, I shall be very glad to furnish.

Yours very truly,

Nicholas Barker

nickel-iron

COLUMBIA MINES CO., INC.

Thomas A. Edison, Esq.,
Orange, N. J.

over after file in nickel box
PLACER, OREGON, Oct. 1, 1901

Dear Sir:-

For some time I have been contemplating placing myself in communication with you, until a day or two ago Dr. David T. Day of the U.S. Geological Survey, suggested that I do so. Stating that you were looking for a Nickel supply. Also that he had called to your attention, at the Buffalo Exposition, some samples of "Josephinite", a native alloy of iron and nickel. About ten years ago I discovered that this was a new mineral I turned it over to Dr Day, the department made an exhaustive determination and named it after its locality. For years the placer miners have found the pebbles in their sluice boxes, and they were a puzzle to everybody. I made a visit to the locality, and ascertained that it is derived from a certain belt of Serpentine, and is contained in the debris over a large area of country, some of the country is auriferous and some is barren of gold. The major portion of the nickel contents are a fine sand, in the form of scales of serpentine with particles of metal attached and vice-versa. To win it from the debris, magnetic separation must be resorted to. I made several tests with an ordinary horseshoe magnet. Out of the high water sands the material gathered by a magnet of weak power ~~was~~, assayed 2-1/2 % nickel. Out of the material thrown out of some old prospect shafts in search for gold, the material collected assayed 5 % nickel. The percentage of material separable by means of a magnet is quite large, of this I have not yet made any determination. The material extracted by the magnet consists of magnetite and Josephinite, the magnetite might be eliminated by some means to be yet discovered and the product thus enriched in nickel. The mineral is composed of about 70 % nickel and 26 % iron, and contains nothing of a

COLUMBIA MINES CO., INC.

(2)

PLACER, OREGON. 190

deleterious nature to affect steel. The product is in a shape to melt down direct in a cupola into a pig metal consisting of nickle and iron, in a very pure state that can be added direct to steel to give it the desired percentage of nickle. The percentage of nickle in the pig depending to what extent the magnetite is eliminated from the product from the magnetic separation. There is plenty of water in the country for power, and plenty of wood for fuel. Will be pleased to hear from you on this matter, as I am thoroughly impressed that it is an immense proposition, and will solve the nickle supply for a long time to come. I might state in addition that the locality is about 40 miles from the Southern Pacific Railway, and also about 46 miles from the Pacific Ocean by road.

Yours Very Truly,

Wm. H. Hampton

Will you please send a

*small sample of
Magnetic Concentrate
by hand mail*

*Some of Charles Matfield
If possible I will take
mail up E*

[ATTACHMENT]

Hours of the 16th Oct used -

Please give me the following data as far as you can

- 1st Over what area of country is the ground containing the black sand with gossophinite found
- 2nd How far away from the serpentine belt is it found - or is it found only along the water courses leading from the serpentine belt -
- 3 ~~How~~ⁱⁿ a pan of gravel on an average how much black sand will there be & what proportion will be gossophinite =

[ATTACHMENT]

2

5. Do you know if the ~~garnet~~
Josephinite has actually been
found in places in the Serpentine
fss is it sparsely disseminated
through the rock or in Bunches -

6th Is the Serpentine Belt heavily
wooded -

7 In your opinion could the
Concentration of the Black sand
be done cheaply by water,
How much per cubic yard +
also How much Josephinite
would a Cubic foot of gravel
carry

[ATTACHMENT]

8. Is the Black sand found only in
the bars of the River or is it
found in the general gravel of
the Country around the
Serpentine Belt

9. I would like a sample of
Black sand Concentrated by
panning - also a little
of the gravel Black sand
is found in - also pieces of
Serpentine with adhering
Isosaphinite -

10. please give me any other
information that you think
would be valuable in any

[ATTACHMENT]

4

at a conclusion as to the quantity
obtainable & the Commercial
feasibility of production —

I think There must be some
way to separate the Magnetite

Yours Truly
J. A. Edison

Sudbury Ont -

Oct. 17, 1901 -

Mr. Thomas A. Edison —
Orange, N.J.

Dear Mr. Edison: —

After much delay we finished the work in
Graham and returned to Sudbury last evening.

The ground covered in Graham was as follows —
Northern halves of lots 6, 7 and 8 and north western corner
of lot 5, Con. VI. This includes Ranger's Claims in lots
7 and 8. High attractions were found in three locations, namely
NE corner of lot 8, and northern part of lot 6. There
were no showings in Ranger's claims and he failed to
show us any stain of any account.

The attraction in the NE corner of lot 8 is within an
area which Ranger thinks is taken. We however have
applied for it. We have also applied for the northern quarter
of lot 6.

A large part of the ground covered was principally
diorite but contained numerous patches of granite. It is
the extension of the contact upon which are located the
Cristy and Gertrude Mines. In lots 7 and 8 the readings
were taken as far south as Ranger's southern boundary
and in lots 5 and 6 to where the rock was nearly all
granite but with patches of diorite.

We enclose a large map of the area covered and de-
tailed maps of the three localities of high attractions

Elevation data were made at each place and noted on the detail maps.

Tomorrow morning we expect to start out for the region south west of Lake Nahnapitae, making our first camp on the lake near the north west corner of Falcon bridge. According to Ranger this is in a region of gravel beds, where there are few outcrops, in which case we shall have to survey by lots. He thinks this is a favorable region. We have supplies for at least five miles and expect to remain out until the end of the season.

In response to our application made on Sept. 14th the Land Dept. has replied as follows -

All of lot 9, Con. I of Creighton was already taken, supposedly by Elzevir, but in another man's name.

Eastern half of lot 10, Con. I, of Creighton was previously applied for by the Manitoba & North Shore R.R.

N $\frac{1}{2}$ of NW $\frac{1}{4}$ of lot 11, Con. II of Graham is cut by the Vermilion River. Consequently to dispose the boundaries correctly a survey by government surveyors would have to be made before an application could be considered.

The applications for - S $\frac{1}{4}$, lot 1, Con. I of Fairbank; S $\frac{3}{4}$ lot 2, Con. I of Fairbank; and N $\frac{3}{4}$ of lot 12 Con. II of Graham are filed and will be "considered on payment of first years rental at \$7 per acre."

Two applications are yet to be reported upon -

As only the western half of lot 10, Con. I of Creighton is applied for, an application for the eastern half was

filed with Mr. Ryan today. We would like your advice in regard to the claim in lot 11, Con. VI of Graham. Do you wish to have a survey made and if so, should we arrange for it? We would also like to know whether we should make the first payment on the applications allowed, which, Mr. Ryan warned us, would be due in about one month. There is some probability of other men taking these up upon the least irregularity in payment or the like. Do you wish all the applications made out in your name?

The applications so filed today are as follows -
 $N\frac{1}{2}$ of $NE\frac{1}{4}$ Lot 8, Con. II - of Graham - by T. A. Edison
 $N\frac{1}{4}$ " 6, " VI " " J. V. Miller
 Whole " 4, " V " Snider " T. A. Edison
 " 3, " V " " " T. A. Edison
 $S\frac{1}{2}$ of $N\frac{1}{2}$ and } $SW\frac{1}{4}$ 5, " I " Snider " W. S. Mallory
 $N\frac{1}{2}$ of $S\frac{1}{2}$ }
 $E\frac{1}{2}$ " 10, " I " Brighton " W. S. Mallory.

Samples from the three localities of high attractions and the small showing in Kangas-Cham in Graham will be prepared to you tomorrow -

Some arrived on Monday last and seems to be a very promising fellow.

McCormick asked us to remind you of the samples he gave you just before leaving here. They are from his claim in Borcle, W.B. 229 -

Yours sincerely -

Cloyd W. Chapman.

J. V. Miller

P.S. Received the clips yesterday.
 Still no continue resting an office

Nickel lands
Hearst & Mc Kay
Barristers, Solicitors, &c.

W. H. Hearst. J. Mc Kay.

Sault Ste. Marie, Ont.

Oct 21st, 1901. 1901

Thomas Edison, Esq.,

Care American Hotel,

Sudbury, Ont.

Dear Sir:-

We have a party who claims to own a large mineral deposit of ferrotite highly magnetic and carrying a large percentage of sulphur, lying within two or three miles of a railway. The property is low in nickel contents.

If you are disposed to have your expert examine same we would be pleased to furnish him full particulars.

Yours truly,

Hearst & Mc Kay

Answered
Nov 9 1901

I am after Nickel
send a sample
E

nickel-lens

The Dominion Mineral Company.

Answered
Oct 26-1901
3 Seymour Avenue, Montreal, Oct. 23rd, 1891 1901.

Thomas A. Edison Esq.,

Orange, N. J.

Dear Sir,-

With reference to our previous correspondence, I am directed to advise you that Mr. Wm. C. McIntyre, one of our Directors, and the principal Shareholder of the Company, will be in New York on Wednesday next, the 30th instant, and if it is convenient to you to make an appointment, he will be pleased to call and see you with reference to this Company's properties.

Awaiting the favor of your reply,

Yours very truly,

W. C. McIntyre

Have Mr. McIntyre

Call upon telephone when he

gets in NY & arrange

appointment I am at Labort

Orange nearly all the time

E

C. H. GREEN.

J. C. RYAN.

The Soho Group of Mines.

KASLO, B. C.-Oct. 23, '01.

Thos. A. Edison, Esq.

Dear Sir,-

Your letter to hand, I have wired you to-day as follows.
"Offer contained yours fourteenth accepted upon guaranteeing me
two thousand dollars per annum. Property to be worked continuously

I interpret your letter to mean that I am to get two thousand
dollars per year no matter if the ore shipments do not amount to
that at 50 cts. per ton royalty, and if more than 4,000 tons I am
to receive 50 cts royalty on each ton just the same.

I had figured on a cash price, or cash and bond. In fact I had
it sold for cash early in '93, the panic coming broke my deal. I
consider, however, and offer coming from you as worth more than
the average by 50%. I trust your men will find the property
satisfactory. It is getting late, snow will soon be on the ground
to avoid delay I have wired you my acceptance.

I enclose a little map to guide your men in finding the property
and the ore showings, and exposures of iron capping, etc.. I
understand a pulp mill and other improvements are about to be estab-
lished at Nickel City, half a mile west of our property on the
Vermillion River. I understand navigation is open to the Georgian
Bay from this point, but am not sure. The places where ore show-
ings exist may be a little difficult for a stranger to find. No
doubt underbrush may have overgrown approaches and exposures of
ore in some places. If essential to making a deal I would go out

there, and show your men the property, and close the deal. A Mr. Gordon, now tax collector of the township worked with others for me mining on the property.

I send a copy of this to your manager at Sudbury so that you can telegraph him to go on and examine, in case snow might come soon.

Very Sincerely,

J. C. Ryan

[ATTACHMENT]

Kaslo B.C. Oct 23-1901
Thos A Edison
Orange N.J.
Offer contained your
fourteenth accepted upon
guaranteeing 2000. per year.
Property worked continuously;
J.C. Ryan

Telegram

[ATTACHMENT]

J. C. Ryan

Will you lease your
mineral right on a royalty
basis of 50 cents per ton
for each ton of milling or
mined with a minimum
guarantee of ~~\$2500~~ ^{two}
thousand dollars per year
+ option to purchase if so.
I will send my men who
are now at Sudbury and
examine the prospect
Yours Truly
J. C. Ryan

[ATTACHMENT]

Miller & Chapman

I send you herewith correspondence with
a Mr Ryan - You will see that if his
statements are truthful this would
be a good & cheap proposition,
to start up an - If you can I
would very much like before the
Quos Comes for you to go down
& get samples & note the gas and
width appearance & everything
& also make a good survey pretty
close readings - then I will be
in a position to carry on further
negotiations - Yours
E. M.

Nickel 1 mbs

By the peculiar character of your
assay & exploration statements
you make I am convinced that
you would waste time & money
to visit your property
Thomas A. Edison Esq.
Orange N.J.

Edison Answered
Nov 1-1901

Dear Sir

Memo of 14th Just duly to hand and
contents noted. Regarding nickel properties I have
your nickel properties for sale and will sell cheap
for cash. I will give you an option of one
property for 90 days (mainly) for \$50,000⁰⁰ fifty thousand
Dollars, \$25,000⁰⁰ Twenty five thousand Cash and balance
in 90 days. I will now describe the property

It is the largest show of nickel in the Sudbury
district. Is two miles long all but two chains showing
some all through. It is 300 feet wide from wall to wall
Green Hamblende on one side and diorite on the
other side. It is also 300 feet high from the level of
the Spanish River. There are thin shafts sunk
in this property 14 feet deep which is only called
surface show. Enclosed you analyze's related
all from the one shaft which will convince you
the property is a good one. It is situated 38 miles
west of Sudbury 2 miles from C.P.R. Railway. I have
also practical experts report on this property some
of your own men from your side Mr C.P. Boyd
Now my decision if you mean business and want to buy a
good property. I am ready to go and show you
the property at any time don't do not wish to them

or spend money for nothing. My time
is very valuable at present.

I am respectfully

Yours

John Moore

for L.

Letter Addressed "Edison, New York"

*From the Laboratory
of
Thomas A. Edison.*

Subject: _____

Orange, N.J. Oct. 25, 1901.

Messrs. Miller & Chapman,
Sudbury, Ont.,
Canada.

Dear Sirs:

I send you herewith correspondence with a Mr. Ryan. You will see that if his statements are truthful this would be a good and cheap proposition to start upon. If you can, I would very much like before the snow comes for you to go down and ~~get~~ ^{if you can} ~~samples~~ and note the gossamer width appearances and everything, and also make a good ^{rough} survey pretty close readings; then I will be in a position to carry on further negotiations.

Yours truly,

Thomas Edison

[ENCLOSURE]

(Copy)

Kaalo, B. C., Sept. 19, 01.

Edison, Esq.,

Dear Sir,-

I see by the papers you have opened an office in Sudbury for the purpose of studying, and if satisfactory, purchasing nickel lands.

I enclose brief report on a property I own some twelve miles out on the Soo line. If you examine the property and find it suitable to you, I will endeavor to arrange price to your satisfaction. I will take a very reasonable cash payment, or \$25,000 on time payment and bond. An early reply will oblige, Yours, truly,

(Signed) J. C. Ryan.

[ENCLOSURE]

(Copy)

THE NICKEL HILL MINES.

Description of the property.

All of Lot 8 Con. 3, Township of Graham, comprising 369 acres south quarter of Lot 8, Con. 4, Graham 80 acres. Of the last described I only own a one third interest.

Dates of issue of patents was as follows:-

August 1898, North Half Con 3 Graham, 161 acres.
December 1891 South Half Con. 3 Graham, 168 acres.
September, 1899, South Quarter, Con. 4, Graham, 80 acres.

SITUATION.

The situation is a very desirable one, being but half a mile from Nickel City and the Vermillion River, on the Soo line of the C. P. R. towards Sudbury, the track of which passes through the South Half of the property, and about 12 miles from Sudbury.

DEVELOPMENT WORK.

In 1899 we did considerable work on the property, stripping the vein for half a mile across the property. In some places the iron capping was 30 to 50' wide. We did some work on the point of a hill called Nickel Hill, about a quarter of a mile north and near the line of the C. P. R. track, adjoining Lot 7. It showed up some very good Nickel ore. We sank several test pits at various points along the vein, which also disclosed strong iron cappings, or gossan, which, on acquiring depth disclosed the usual pyritic or nickel ores of the country. Several assays gave from one to five per cent nickel, and .75 to 5 percent copper, gold \$3 to \$5.00, platinum from a trace to several dollars.

About one fourth of a mile further north, or near the center of the lot is a strong vein showing an average width of 30 feet.

[ENCLOSURE]

-2-

In 1892 Mr. Alfred Merry, then manager of the Vivians, Swansea, Wales, then one of the best nickel experts in the world, made a report on the property, for a valuation of \$100,000. Mr. Merry said I had a good property, and strongly advised me to keep it for a much higher sum. At the same time Mr. Michael J. Grady of Kingston, Ont. made a report on the same for a syndicate he was sent out by for the same amount. A Mr. Austin, an expert for a Boston syndicate accompanied Mr. Grady, and both reported favorable on the sale of the property for that sum. The fall of silver and panic coming on before negotiations were concluded, the deal fell through, though I had the assurance of both Mr. Grady and Mr. Austin that the property was entirely satisfactory as to price and valuation, but their principals feared panicytimes, and held back on that account, and that only. Mr. Grady's address is still Kingston. I do not know Mr. Merry's or Mr. Austin's addresses at present.

Mr. Grady was sent by a Cleveland syndicate with whom was then associated Governor Flower of New York. The duties placed on all ores at the mouth of the pit by the Ontario government produced a bad effect, and practically drove out capital. I left the country then and have been mining in B. C. ever since.

(Signed) J. C. Ryan.

[ENCLOSURE]

(Copy)

Orange, N. J. Oct. 14, 1901.

J. C. Ryan, Esq.,

Kaslo, B. C.

Dear Sir:

Will you kindly let me know if you would lease your mineral right on a royalty of fifty cents per ton for each ton of milling ore mined, with a minimum guarantee of two thousand dollars per year and option to purchase, if so I will send my men who are now at Sudbury and examine the prospect.

(Signed) Thos. A. Edison.

(Copy of Telegram.)

Kaslo, B. C. Oct. 23, 1901.

Thos. A. Edison.

Orange, N. J.

Offer contained yours fourteenth accepted upon guaranteeing \$2000 per year. Property worked continuously.

(Signed) J. C. Ryan.

[ENCLOSURE]

Kaslo, B.C.
Oct, 23, '01.

Manager for Mr. Thos. A. Edison,
Sudbury.

Dear Sir,-

I send you to-day a map to ~~the~~ guide you in finding my nickel land in Sudbury. I send a duplicate to Mr. Edison, and am sending this to you in case he may wire ~~me~~ you to examine the property. The places where ore showings exist may be a little difficult for a stranger to find. No doubt underbrush may have over grown approaches and exposures of ore in some places. A Mr. Gordon, now tax collector for the township worked with others for me mining on the property.

Very Truly Yours,
J. H. Ryan.

[ENCLOSURE]

Kaslo B.C.
Oct. 23, 11.

Manager, for Mrs. W. Ellison, -

Dear Sir, -

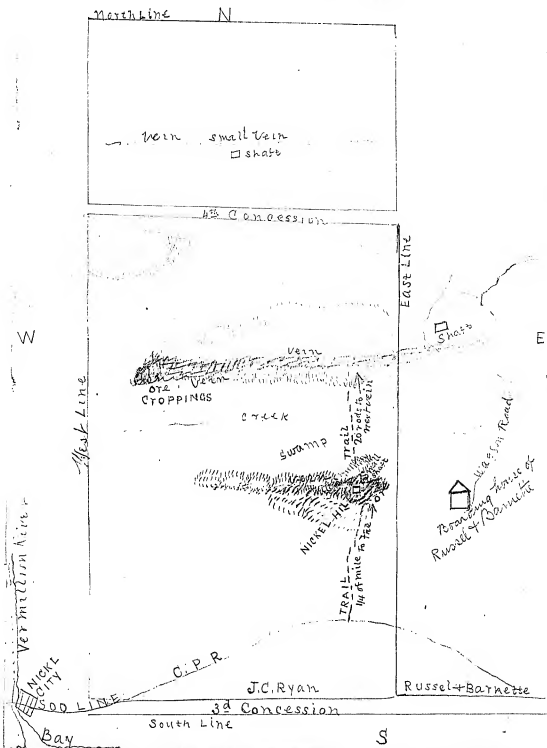
I enclose map which
I overlooked in my letter yesterday

Very Truly,

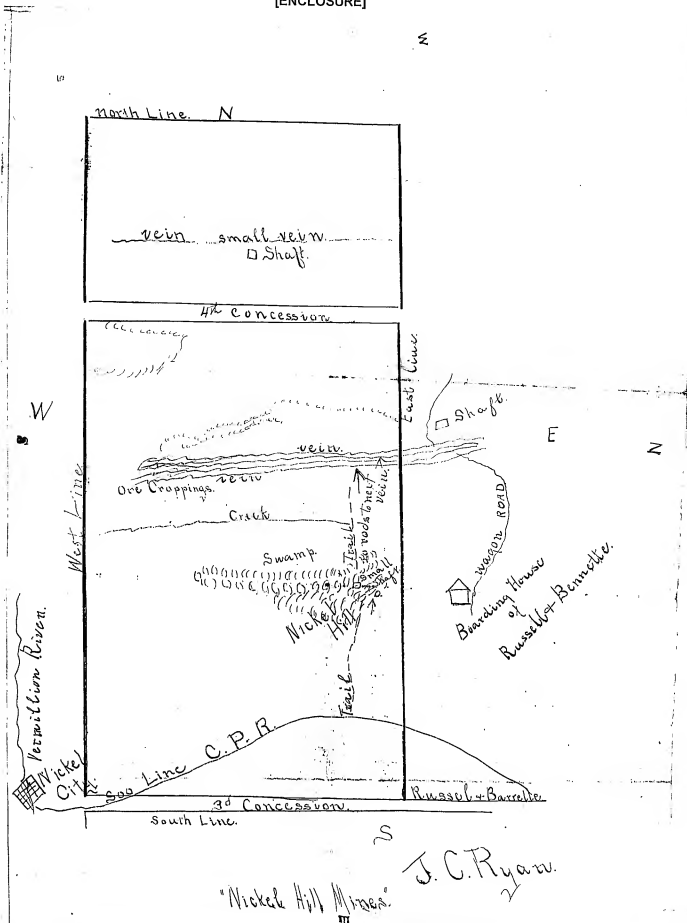
James C. Ryan.

[ENCLOSURE]

WATER POWER



[ENCLOSURE]



ALBERT G. BURRAGE,
PRESIDENT.

NATHAN F. LEOPOLD,
GENERAL MANAGER.

CHARLES G. BURRAGE,
TREASURER & TELEGRAPH.

LONG DISTANCE TELEPHONE CENTRAL 226.

ARCADIAN COPPER COMPANY,

402 EQUITABLE BUILDING,
108 DEARBORN STREET.

OFFICE OF THE
GENERAL MANAGER.

CHICAGO. Oct. 26, 1901.

94
Thom
002V
Mr. Thomas A. Edison,

ORANGE, NEW JERSEY.

Answered
Nov. 1, 1901

My dear Sir:

A number of Chicagoans own the Sultana nickel mine in the Sudbury district, Canada, and have been engaged in developing same for almost two years. They have put down five shafts, with an average depth of possibly 75 feet, and the bottom of each shaft is in nickel ore, which assays as follows: Nickel, 3 to 4%, sulphur, 25 to 30%, iron, 50%, and two or three dollars in gold and silver.

The above mentioned gentlemen are not mining men, having taken hold of the property with no other view than to offer it for sale, and are rather at a loss as to what further proceedings to take. Now, one of the principal owners has come to me with the property, and having learned of your visit to the Sudbury district, with the possibility that you may have visited the Sultana, it occurred to me to write you regarding same, with a view to interesting you in the property.

If you desire to take this matter under consideration, I shall be pleased to gather any information that may facilitate investigation on your part, and would ask you to acquaint me with your pleasure.

Yours truly,

N. F. Leopold

[ON BACK OF PRECEDING PAGE]

I have a number of my
men in the Sullana district
prospecting & they have found
numerous mines but have not
developed any & do not know
if they are valuable, I shall
want considerable Nickel for
my new battery & intend spending
some or leasing one on a royalty
per ton basis. I know of the
Sullana mine & am told that it
is a fairly good mine but rather
far from Barter, although not
far to be seen. Would you
consider a proposition of working it
on a royalty basis. I have several

When the owners who have agreed to a royalty
on the Sullana mine of something or 2 but the
own government had you they require is the only
acting point
Now to Barter

C. W. PETERSON,
2449 PRAIRIE AVE.,
CHICAGO, ILL.

Is not this the wrong page?
Exhibit 4

Charlton

Approved
Aug 9-1901

[OCTOBER 1901]

TAE writing

Miller =

Srds John

I will fix up the matter you
spoke of in your personal
letter =

Regarding paying for lots -
~~ask~~ ask Ryan at Vicksburg if we
pay the 1 dollar per acre down can we
have time to survey & how much
also supposing after surveying we
did not want as much of a lot
as we had paid in the 1 dollar for
would it be credited on other
lots - I think we better pay the

2

One dollar per acre on all we
have found. + then we can ~~survey~~
have plenty of time for govt
survey afterwards if this is
not so inform me

Σ

Call Address "Edison's New York"

*From the Laboratory
of
Thomas A. Edison.*

Subject: _____

Orange, N.J. Nov. 2, 1901.

Mr. John Miller,
Sudbury,
Ont.

Dear Sir:-

I send you herewith some further information regarding
Ryan's mine.

Please have Chapman go down there and make complete survey
if you can get along without him.

Yours very truly,

Thomas A. Edison

(Enclosures)

The New American Hotel.

HEATED THROUGHOUT BY STEAM,
LIGHTED BY ELECTRICITY,
ELECTRIC BELL, IN EVERY ROOM,
SAMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.



S. N. Doyle, - Proprietor

LARGEST AND FINEST HOTEL IN
THE CITY
STRICTLY FIRST-CLASS
RATES \$1.00 TO \$2.00 PER DAY.

Saturday, Oct. 3, 1901

Mr. T. E. Edison -

Orange, N. J.

Dear Mr. Edison -

Send \$500, more to Mills

Since our last report of Oct 4th, we have been in camp in the NE corner of lot 1 Con. II of Falconbridge and have surveyed the following lots - the Falconbridge - lots 11 & 12 Con. II, parts of lots 11 & 12, Con. II - and in Garrison - lots 1 & 2 Con. II and lot 1 and part of lot 2 Con. I. In this area we have found only one area of high attraction which is in the southern part of lot 12, Con. II of Falconbridge. No ditch survey has been made as yet but from the preliminary survey it probably is over 1000 ft. in length and 150 ft in breadth. It is in a gravel pit and no outcrops appear in the vicinity.

In the vicinity of the present camp we have enough work to keep us busy until the end of the season. The general opinion is that we cannot work later than the 20th of this month and we have decided to break camp about that time and are making arrangements accordingly.

Within two miles of the camp to the east in lots 7 & 8, Con. II & I there are two claims held by the N. C. Co. The showings are high in attraction, quite

T. A. E. Nov. 3 -

(2)

The New American Hotel.

HEATED THROUGHOUT BY STEAM;
LIGHTED BY ELECTRICITY;
ELECTRIC BELL IN EVERY ROOM;
SAMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.



LARGEST AND FINEST HOTEL IN THE
DISTRICT.

S. N. Doyle, - Proprietor.

U.S. STRICTLY FIRST-CLASS.
RATES \$1.00 TO \$5.00 PER DAY.

Sudbury, Ont., 190

extensive and the ore looking good. They have been somewhat developed but as yet no work is being done upon them.

Your letter of Oct. 25, in regard to the property of J. C. Ryan has been received. We shall arrange to make a survey immediately and send you report and sample as soon as possible.

We are also in receipt of your letter of Oct. 21, in regard to payments of rentals and surveys of high attraction areas. We are in considerable doubt as to your instructions in regard to applications, surveys etc. We understood at the start that we were to apply for any area that looked at all promising. In that case along the Vermilion River in the townships of Brighton, Fairbank & Graham the localities of high attractions were so numerous & irregularly distributed that we applied for those portions of the lots which would surely include all of them. As the lots were 300' apart the survey is not sufficiently accurate to determine within narrow limits just what portions should be taken or omitted. As the rental is only 1/2 pice acre for the first year we think it advisable to pay this and determine later whether or not to hold them longer and have paid today the first quarter of the rent on those applications which

Sheet 3 -

The New American Hotel.

HEATED THROUGHOUT BY STEAM,
LIGHTED BY ELECTRICITY,
ELECTRIC BATHS IN EVERY ROOM,
AMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.



S. N. Doyle, - Proprietor.

LARGEST AND FINEST HOTEL IN THE
DISTRICT.
STRICTLY FIRST-CLASS.
RATES \$1.50 TO \$2.00 PER DAY.

Sudbury, Ont., 190

have been allowed. Which rental amounts to \$39
In regard to the surveying of areas of high attrac-
tion mentioned in your letter of the 12th it is
not necessary to have a survey made if we take a
fraction of a lot, such as NE 1/4, S 1/2, or NW 1/2 of
NE 1/4. But if you wish to take up the minimum
area to include the high attraction thereby making
irregular boundaries it would be necessary to have
a survey made by an Ontario Land Surveyor. The
price of surveying as given by Demorest & DeRose
is as follows -

Surveyor	\$7.00 per day
Assistant	\$2.50 " "
3 Acre	@ 2.00 6.00 " "

All travelling and living expenses, including camp
equipment.

They calculate on running one mile of survey per
day.

In regard to the surveying of Lot 11, Con. II of
Graham's we decided not to have this done, owing
to the fact that we are in considerable doubt
as to the claim of the attraction and having con-
siderable the ground in the vicinity which is appar-
ently better.

On one of your late letters you said you were

Nov. 3

(H)

The New American Hotel.

HEATED THROUGHOUT BY STEAM.
LIGHTED BY ELECTRICITY.
ELECTRIC BELL IN EVERY ROOM.
SAMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.



S. N. Doyle, - Proprietor.

LARGEST AND FINEST HOTEL IN THE
DISTRICT.
...STRAIGHT FIRST-CLASS...
RATES \$1.00 TO \$3.00 PER DAY.

Sudbury, Ont. 190

Trying to arrange with the Crown Land Dept't to ob-
tain land for a time without payment of rental. As
we have barely nothing further I should like to know
whether all applications in the future should be in
your name, regardless of regulations which for-
bids the application for more than 320 acres
by one party.

Upon clearing here we shall store our camping
equipment, unless we receive different instructions
from you. We shall also open up the office.

As far as heard from - the following applications
have been allowed:

S $\frac{1}{2}$ Lot 1, Con. I of Fairbank -

S $\frac{3}{4}$ " 2, " II " "

N $\frac{3}{4}$ " 12, " VI " Graham.

S $\frac{3}{4}$ " 4 " I " Snider

These applied for but not allowed on account of
previous applications by other parties -

N $\frac{1}{2}$ Lot 9, Con. I, of Crighton

W $\frac{1}{2}$ " 10, " I, " "

N $\frac{1}{2}$ NE $\frac{1}{4}$ " 8, " VI " Graham

W $\frac{1}{4}$ " 4, " I " Snider

Today we made the first payment of 25 cents
per acre upon the following -

The New American Hotel.

HEATED THROUGHOUT BY STEAM.
LIGHTED BY ELECTRICITY.
ELECTRIC BELLS IN EVERY ROOM.
SAMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.



S. N. Doyle. - Proprietor.

LARGEST AND FINEST HOTEL IN THE
DISTRICT.
STRICTLY FIRST-CLASS.
RATES \$1.00 TO \$2.00 PER DAY.

Sudbury, Ont. 190

5 1/4	Lot 1,	Con. I - of Fairbank	80 acres.
5 3/4	" 2,	" I " "	240 "
N 3/4	" 12,	" VI " Graham	235 "

As the amounts for these payments has been taken from the bank account the same is reduced to about \$120. As the October bills are now due and as more payments or applications will soon become payable & for this credit he will be sent to the Ontario Bank at once -

Yours very sincerely -

Clayton M. Chapman.

John V. Miller

D. L. McLEAN,
Solicitor, Guelph, Ont.
Solicitors Court, Parliamentary
and Departmental Agents.

OFFICES—Rivers 9 and 10 Parry Bldg.
41 Sparks Street

file Nickel
Ottawa, Ont., November 4th. 1901

Sample
T. A. Edison Esq.,
Electrician Etc.,
Orange, N. J.

Dear Sir,—

Some time ago in reply to a letter of mine offering you some nickel property for sale, you were good enough to say that you were open to lease a property. Amongst the properties now at my disposal, the following is the only one which I can offer you on lease. This property consists of 40 acres near Burks Falls, Ont. The rent asked is \$3,000. per annum in advance, with the option to purchase outright at any time for \$50,000. The property is situated quite convenient to the railway, and it is said that some \$50,000 to \$10,000 have been spent upon it for improvements and developments. There is one shaft on this property about 60 ft. in depth, from which some 40 tons of ore have been taken, which is still on the dump. The improvements consist of a cooking shanty or kitchen, a sleeping camp that would accommodate about 20 men, a blacksmith shop stable etc. none of which buildings are expensive buildings, but might do very well for the present. The property is situated in the Parry Sound District on the G. T. R. about half way between Bracebridge and North Bay, and being only a short distance from Sootia Junction, (the crossing of the G.T.R. and C.A.R.), there is ample facilities for shipping the ore. I do not think the owners have had any assays of the ore yet, but if you are still open to lease, and would be inclined to consider this property, and would like to see the ore, I will be pleased to send you a sample. Kindly let me know what quantity you would require. If you think of taking the matter up this autumn you will see the propriety of doing so at once as the season is now far advanced.

yours truly,
D. L. McLean

L. L. McLean,
 Collector, etc.
 U.S. District Court,
 District of Columbia.

...and you

OFFICE OF
MANSION HOUSE,
 Miners' and Lumbermen's Home,
 T. COX, PROP.

Special Attention Paid to
 Transient Trade.

Free Fishing and
 Hunting.

Whitefish, Ont.

For 5, 1901

Mr. T. A. Edison

Orange, N. J.

Dear Mr. Edison:

Your letter, and envelope
 of Nov. 2, just received. You will
 notice that I am already in
 Whitefish. Claude Godyke is visit-
 ing me and we expect to start the
 survey of the Ryan property to-
 morrow. Chapman is looking
 after the work in Falconbridge.
 We send you a full report on
 Sunday, the 3rd.

In this we referred to the
 matter of survey, payment of
 rental etc., which will shortly
 answer your questions of the 2nd.

Nov. 5
 OFFICE OF
MANSION HOUSE,
 Miners' and Lumbermen's Home,
 T. COX, PROP.

Special Attention Paid to
 Transient Trade.

Free Fishing and
 Hunting.

Whitefish, Ont.

190

In further answer I would say -
 In regard to your question -
 "If we pay the one dollar per
 barrel down, can we have time
 to survey, and how much?" - I
 cannot answer this fully but the
 payment of rental for one year.
 I should judge, would insure
 the holding of the property for
 that length of time and only
 upon the non-payment of rental
 for the next year, would we lose
 the claim.

In regard to the second question
 concerning the transfer of rental
 from one claim to another -
 Mr. Ryan informed me that
 he thought this could be arranged

Nov. 5-

3

OFFICE OF

MANSION HOUSE,

Miners' and Lumbermen's Home,

T. COX, PROP.

Special Attention Paid to
Transient Trade.



Fine Fishing and
Hunting.

Whitefish, Ont.,

190

With the Crown Land Dept. Y., down to
the extent of giving us credit
for an entire lot, should we
wish to give up any, after pay-
ment of Rental I shall have
been paid our debt, and about then
You will, of course, send a
sufficient credit to the book to
take the pay ment on all claims, of
your debt.

Will send you a report of the
Ryan property as soon as possible.
Thanking you for your kind
note in regard to the personal
matter, It remains,

Yours sincerely,
John V. Miller

THE SULLIVAN GROUP OF NICKEL AND COBALT MINES.

PROPERTY.

C. H. Wilbur

74-Super. sub. Del.

(Dist. 420 Burke Block Seattle)

*See mine Copper
No Nickel*

This property consists of four full sized Mining Locations, of Six Hundred (600) feet by Fifteen Hundred (1500) feet each, and adjoining, making a continuous length of Six Hundred (600) feet on the vein, located under the United States Laws pertaining to Mineral Location, and recorded in the Books of the County Recorder, of Churchill County, Nevada, the County in which they are located, at Stillwater, County seat of Churchill County, Nevada. These four (4) Mining Claims, are called "THE ECHO", "THE HENRIETTA", "THE TIGER" and "THE APPLEBLOSSOM", and are situated in Cottonwood Canon, forty-five miles from Lovelock Station, on the Central Pacific Railroad. A good wagon road connects this property with the railroad-station, which is in good condition at all seasons of the year. There is also a good water right in connection with this property, that affords a plentiful supply of water at all seasons of the year, for Mining and Milling Purposes, as well as for domestic use.

There is also a Mill Site of Five (5) Acres, located adjoining this property, which is recorded in connection with it.

DEVELOPMENT.

The development work consists of a shaft on The Echo, sixty-feet deep, from the bottom of which a tunnel has been run a distance of thirty feet; the ledge in the bottom of the shaft, and throughout the tunnel, shows 3-1/2 feet in width of ore, that will assay Six (6) per cent Copper, Four (4) per cent Cobalt, and Twelve (12) per cent Nickel; about fifty (50) tons of this class of ore is on the dump that came out of this shaft and drift, besides quite a large quantity of badly mixed ore and vein matter.

On the Henrietta, there is an open cut thirty (30) feet long, from which there has been taken sixty (60) tons of ore of practically the same value, and which is now on the dump.

There is also another small out about ten (10) feet in length which shows the vein to be 4-1/2 feet in width, the same as in the thirty (30) foot out referred to above.

On the Tiger and Appleblossom Claims, the only work done has been a few open cuts that were necessary in doing the annual assessment; these Claims were located more as a protection to The Echo, and The Henrietta, than for their value.

FORMATION.

The formation in which these Nickel Ores exist, is a ~~porphyritic~~ **io dike**, which is several hundred feet in width; all of which carries a small percentage of Nickel, Cobalt and Copper, which would tend to prove that, as depth may be obtained, that very much larger bodies of this grade of ore should exist as throughout this entire dike, small stringers of high grade ores are encountered.

ELEVATION.

The Elevation of this Property is about Forty-two Hundred feet, rising to Five Thousand feet, with a southern exposure.

CLIMATE.

The Climate is mild and dry; the snow-fall never reaching over twelve inches, which only lasts for a few days in the most severe portion of the winter, and the rain-fall aggregating during the balance of the year, less than six inches.

TREATMENT OF ORES.

For the treatment of these, and such other ores as exists in

-3-

this locality, there are an abundance of flux, such as lime, iron, silica, and lead, as they abound in large quantities adjacent to this property.

W A G E S & S U P P L I E S .

The wages of miners in this locality are \$3.50 per day, of ten hours; car-men and above ground men, \$2.50 per day; supplies of all kinds are as reasonable as any mining camp in the Rocky Mountain Region.

T I M B E R .

There is an abundant supply of Pinion and cedar Timber to be had within three miles of this property that is suitable for timbers and lagging in the mine, and wood can be delivered at \$3.50 per cord, for such purposes as desired. Charcoal costs of pine or cedar, Nine Cents (.09) per bushel; mahogany, Twelve (.12) Cents per bushel. Lumber for building purposes, Twenty-eight Dollars (\$28.00) per M.

(Signed) J. T. REID,

LOVELOCK, NEVADA.

November 6th, A. D. 1901.

[ON BACK OF PRECEDING PAGE]

25000 = want \$5000 = 4 equal payments
1st payment in 3 months, 10% of price
6 months 20% — 9 months 30%
12 months balance =

If I pay for survey + 10% — then no further
payments to be made until final
receipt for completion of title from US
govt —

Richard
Received Nov 16 1901
ALBERT G. BURRAGE,
PRESIDENT.

NATHAN F. LEOPOLD,
GENERAL MANAGER.

CHARLES G. BURRAGE,
SECRETARY & TREASURER.

LONG-DISTANCE TELEPHONE CENTRAL 226.

ARCADIAN COPPER COMPANY,

402 EQUITABLE BUILDING,

108 DEARBORN STREET.

OFFICE OF THE
GENERAL MANAGER.

CHICAGO. Nov. 8th; 1901.

Mr. Thomas A. Edison,
ORANGE, NEW JERSEY.

*Say that I would be glad to
have him call at Laboratory
when he is East*

Dear Sir:

Yours of 1st inst. was received during my absence from home. In reply, beg to say that I will at once try to get the affairs of the Sultana mine in some kind of shape, and if possible evolve a proposition to submit to you within the next few weeks.

In the meantime, the following are the facts:

The property is a large one, having a total of about 2400 acres. A plant, bought new less than a year ago, consisting of hoist, boilers, compressor, pumps, three Ingersoll drills, tools, buckets, cars and other supplies, together with an engine house 30x60, blacksmith shop complete with tools and supplies, barn with two horses, wagons and sleighs, boarding house with complete equipment and supplies, warehouse, office building, and two houses, besides 800 cords of wood, the total value of the above being about \$12,000., is on the ground and in place, so that immediate operation could be commenced without expense. Besides this, there is mined and on the stock pile a large quantity of merchantable ore, estimated to be all the way from 5,000 to 10,000 tons.

From what I can gather from expert friends of mine who

ALBERT C. BURRAGE,
PRESIDENT.

NATHAN F. LEOPOLD,
SECRETARY.

CHARLES C. BURRAGE,
TREASURER.

LONG DISTANCE TELEPHONE CENTRAL 226.

ARCADIAN COPPER COMPANY,

T.A.E.H. 402 EQUITABLE BUILDING,
108 DEARBORN STREET.

11/8/01

OFFICE OF THE
GENERAL MANAGER.

CHICAGO.

have been through the property, I am of the opinion that it is by far the finest showing of any nickel mine in the Sudbury district, large quantities of ore being exposed wherever opened. It appears to me to be an excellent opportunity, for the reason that there are adequate buildings, equipment and supplies to begin work at any time upon a few days' notice.

I understand that the Manitoulin & North Shore, building from Sudbury to Little Current, will be practically finished this winter, and will run within a few hundred yards of the Sultana property, which would offset the objection of distance from railroad.

It is more than probable that at meetings of my associates in the Arcadian Copper Company, to be held in Boston and New York shortly, I shall be present, and if agreeable, I could arrange to stop at Orange and personally go over matters with you or your representative, which would no doubt be much more satisfactory than correspondence. As to this latter, kindly advise me.

Yours very truly,

N. F. Leopold

Nickel-Ind
STATE OF CONNECTICUT



HOUSE OF REPRESENTATIVES.

COMMITTEE ON THE JUDICIARY.

WILLIAM A. KIRK, of WINDHAM,
JUDITH GRAYMAN.

ROBERT J. WOODRUFF, of GRANT,
GUTHRIE.

JOHN H. FISH, of STAMFORD.

HENRIETT O. HOWERS, of MANDERS.

HARRINGTON H. FRIEDMAN, JR., of STAMFORD.
CHAS. H. WHITTELDNEY, of NEW BRITAIN.

JOHN T. HUBBARD, of LITCHFIELD.
LOUIS J. CURTIS, of STAMFORD.

LITCHFIELD,

Shelford Nov. 9th, 1901.

*Approved
Nov 16-1901*

Mr. Thomas A. Edison,

Dear Sir;

There is a deposit of nickel ore in this town where mining operations were conducted 40 or 50 years ago. This deposit is extensive but of too low a grade of ore to pay for working unless it can be concentrated. Knowing that you have given some attention to the concentration of ores I write to call your attention to these mines. A recent assay of a fair specimen of the ore shows in addition to nickel some copper, a trace of silver and a small quantity of platinum. If you care to interest yourself in the possible development of these mines I shall be pleased to tell you what I know of the assays of the ore and the titles by which the mines are held.

Truly yours

John F. Hubbard.

I have had a sample of the Litchfield ore sent to me by a gentleman living in Philadelphia. It contains nickel but the quantity is too small to pay. However the sample may have been poor. I might send the same sample for assay *100%*

H

I am looking for nickel ores
I have found considerable ore in
Canada

E

Noted. L. S.

C. W. PETERSON,
2449 PRAIRIE AVE.,
CHICAGO, ILL.

12th Nov. 1.

My dear Sir,
No answer

Replying to your favour of
9th inst. I must say that the written
property & lease of the property is the
only one I have seen.

I have seen the
property personally but I am mistaken
it is a very small property. I have
only seen it a short time and you are
the only person I have seen.

Further I must esteem it a personal
favour and must trust your information
is perfectly independent of your knowledge
of any reason why the property should
be offered for sale if your own information
is correct.

I must prefer being a deal the thing
a party to a doubtful transaction
on the one hand if it is all right I
must like to tell you the fact.

Yours
C. W. Peterson

The New American Hotel.

HEATED THROUGHOUT BY STEAM.
LIGHTED BY ELECTRICITY.
ELECTRIC BELLS IN EVERY ROOM.
AMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.

S. N. DOYLE,
PROPRIETOR.

LARGEST AND FINEST HOTEL IN
THE DISTRICT.
STRAIGHTLY FIRST-CLASS.
RATES \$1.50 TO \$5.00 PER DAY.

Fullbury, Ont., Nov. 14, 1901

Mr. T. A. Edison

Orange, N. J.

Dear Mr. Edison:

I finished the survey of
Mr. Ryan's property yesterday and
am today returning to main
camp, until the close of the season.
The property of Mr. Ryan is quite
extensive and seems to be good
as the attractions are very high
& very quiet a little arid, and
the prospect pits there is showing
of mineral. I am sending you
today by express the samples from
the prospect pits. The report on same
with the survey makes I enclose
forward as soon as possible.

Enclosed you will find a letter

The New American Hotel.

HEATED THROUGHOUT BY STEAM.
LIGHTED BY ELECTRICITY.
ELECTRIC BELLS IN EVERY ROOM.
AMPLE ROOMS FOR COMMERCIAL
TRAVELLERS.

S. N. DOYLE,
PROPRIETOR.

LARGEST AND FINEST HOTEL IN
THE DISTRICT.
STRAIGHTLY FIRST-CLASS.
RATES \$1.50 TO \$5.00 PER DAY.

Fullbury, Ont., 190

from the Crown Land Depart-
ment answering questions in
regard to the purchase of rental,
etc. It is quite contrary to Mr.
Ryan's opinion, but he still thinks
that some arrangement could
be made by which a transference
of paid rental would be allowed.
I suggest my stopping off in
Toronto and having talk with
the Commissioner.

Two or three parties have asked us
to look at their properties, claiming
good show, & reasonable price. In
moving them is Mr. C. Connor. Would
it not be well for us to make a
visit to their near here, making a
rough examination and getting
samples. Chapman and I could

The New American Hotel.

HEATED THROUGHOUT BY STEAM.

LIGHTED BY ELECTRICITY.

ELECTRIC BELLS IN EVERY ROOM.

BATHS FOR COMMERCIAL TRAVELLERS.

S. N. DOYLE,
PROPRIETOR.

LARGEST AND FINEST HOTEL IN
THE DISTRICT.

STREET FRONT-CLASH.

RATES \$1.50 TO \$2.00 PER DAY.

Dalhousie, Ont., 100

do this in two or three days, after
the other men have left. Kindly
let me know by telegraph whether
or not you wish me to do this —

Yours truly,
John V. Miller

TAE-writing

J V Miller

Answered
Mar. 19, 1901

I think it good idea to look
over now by prospectus make
a preliminary survey & get
sample so we could carry
on negotiations this week
with the parties, you might
also ask prices before you
make survey as the asking afterwards
would make them think you had
found something good - don't
survey anything wholesale ask
better prices than Ryan as
an option to purchase at
\$15000 at any time — BTW

you better call at Toronto
Free Commissioners, as you
state & see what you can

do -

Σ

C. H. GREEN.

J. C. RYAN.

The Soho Group of Mines.

*Answered
Mar 12-1901*
HASLO, B. C. Nov. 22, '01.

Thomas A. Edison, Esq.

Dear Sir,-

I wired you today, "Will accept Seventy five Thousand Dollars, and insert option in lease for mine". This is the price upon which the property was reported favorably on by Messers Austin Merry, and Grady in '92. Please let me know the result of your examination by your men. If satisfactory I will go to Sudbury or Orange to close the deal.

Very Truly Yours,

J. C. Ryan

Have examined the mine outside assays

It is like all the other mines on the

Dionite outcrop along that line large

quantities of magnetic pyrites containing
scarcely any nickel.

Edison

7.

model general

Received
Dec 12 1901

will analyze
for Nickel
charges

St. Louis, Mo.

Nov. 28, 1901.

Thos. A. Edison,
Electrical Works,
Odensburg, N.Y.

Dear Sir:—

I have been informed
through a friend that you
could analyze minerals. I
have some I would like to
have analyzed, if you will
please let me know your
charges and the best way
of sending it to you.

Please reply at your
earliest convenience, and of lige.

S. Fetherman,

Stroudsburg,

P.O. Dec. 20, 1901.

Pa.

nickel property
Frank H. Eggleston,
Pharmacist.

I am looking after Nickel Mines
and Sample - does in Copper
but good Nickel contents
to Laramie, Wyo. 12/2 1901

Miss A. E. Egan

Frank H. E.

Dear Sir:

I am interested in
a property carrying Copper Nickel
areas. 9 in. from 8 to 17 % Copper
+ 3 to 8 % Nickel. Do you handle
or buy such ores? If so would
be pleased to correspond with
you. I thank you in advance
for an early reply. I am Sir

Yours truly

Frank H. Eggleston

Answered
Nov 12-1901

Nickel - Irons

After answering
INVESTMENTS
MINES AND MINERAL LANDS
MERITORIOUS STOCKS BOUGHT AND SOLD
Answered
Dec 12 - 1901

EDWIN L. McCONAUGHY

No. 16 EXCHANGE PLACE
NEW YORK, N. Y.

"Mr. Thomas A. Edison,

Orange,

Say that he is mistaken about
Sudbury ore increasing in
Dec. 5th, 1901.
Value as they go down whereas

Magnetic pyrites are found the
the ore is determined the quality
Regarding the property I am

Dear Sir:-

Your favor of Nov. 21st is at hand in which you state
that you are after Nickel. I can offer you 74 acres of Nickel
land in Ontario, Canada. This property is located on Lake
Superior, being about one half mile distant from the Lake. A
property has been purchased connecting directly with the Lake so
as to secure a right of way, a natural harbor exists at the Lake
so that shipments can be made right on the rocks.
to work but would like to pay
for the property. I am
only of material easily
many of the ore is
little ore

A railroad runs through the property and the station, of
Schreiber, is two and one half miles distant. The ground was
purchased and is held in fee simple, by a party who opened up a
shaft for pyrites. The shaft is 12' by 12', and is down 45 feet.
They opened a three foot vein of absolutely pure 52' pyrites. The
walls on either side were definitely defined and are composed of
magnetic pyrites, with no gangue matter.

At a depth of 22 feet the vein of pure pyrites collapsed,
and ran to magnetic. The ore below the depth of 22 feet runs one
per cent Nickel, and is the same character of ore as found in the
Nickel mines of the Sudbury District, and the indications are that
as a depth is attained the ore will increase in value as it does
in Sudbury. The veins run the full length of the property and
are from 12 to 15 feet, and even 100 feet wide in some places.

INVESTMENTS
MINES AND MINERAL LANDS
MERITORIOUS STOCKS BOUGHT AND SOLD

EDWIN L. McCONAUGHY
No. 16 EXCHANGE PLACE
NEW YORK, N. Y.

Aug 7. A. H.

All the ore, practically. 1000 tons, remains on the dump as it was not taken ~~away~~ for the owner was only after pyrites and did not believe it would be advantageous to go further down for that mineral.

There is a railway directly there, and the route would be via Toronto, then to North Bay, and finally 450 miles to Schreiber. Anyone going to inspect the property would pass through Sudbury ^{could} and stop off to examine the formation and ores there, and then go to our property when he would find that the ore was precisely the same.

Kindly let me know if this interests you, and if so I will be pleased to send you ore samples and will name a price for the property out-right, in fee simple.

Hoping to hear from you favorably, I am,

Yours very truly,

Edwin L. McConaughey

Sample Received from him.
Lab. Sample #27

Noted Smith
11/21/01

Received by Frank Lee Furness
Nov 21 /

Dec. 10, 1901

Mr. T. A. Edison
Orange, N. J.

Dear Mr. Edison: —

I received this morning a letter
from Mr. Ryan enclosing two letters
from the Comm Land Dept + stating
that our applications for the lots in
Fultonbridge and Garson are under
consideration, but as both townships
are under town or become the Dept's
must first correspond with the
treasurers before the applications can

be definitely allowed.

The work here is progressing quite well and Hardisonville nearly all satisfactorily, considering the weather. The line has revealed is more or less as the paid work we were not able to that it extends over a length of 3000' north on Tuesday on account of rain at least and varies in width from and on Friday day had to abandon 30' to 300' or 400'. It seems to be work for part of the day as the mud along the contact of white limestone was so strong that readings of these and gneiss, on some line at the base could not be depended upon. The of the mountain, on other some distance remainder of the work the weather up the side. The true contact is not visible was quite good but very cold, the but from the Geological map and the thermometer registering $+^{\circ}$ above zero. The general appearance it is probably at Friday morning. the foot of the mountain.

A series of low attractions, 6 and The attraction in places is over under, has been found along the side gneiss rock. No surface stain

is apparent but samples show the
presence of iron.

Hamburgh Mountain is along
the eastern side of the white lime-
stone belt, between the towns mention-
ed above. The line between the
two iron mines, Buckhead and Parker
Shaft, if continued, would lie along
the western side of the white lime-
stone belt.

Samples taken from four different
localities along this line of attraction
are being shipped.

Yours sincerely,
J. V. Miller

Richard B. B. B. B.

Dec 12-1901-

J. Louis Miller
to Mrs. L. Enlap.

Franklin F. F. F.
H. J.

Return ^{here} immediately for Connecticut

Thos A Edison -

Notes by TAE

Dec 13-1901

John J. Hubbard
Lawyer - Litchfield Conn

Samuel Reed, there is seven tenths of one percent of Nickel in the sample with some Copper - My expert has just returned from the Canada Nickel deposits and I will send him up if you will telegraph or receipt of this if the above is right the ground - There may be a fighting chance of finding a fair grade of Nickel ore in Connecticut but the history of mining in New England is rather against it, or also against any commercial success. ~~However, I am not at all sure~~ I would not take any risk except I could buy property at or near land prices.

Yours
N. A. Edison

[TO FRANK BOLITHO]

Dec 18, 1907

Bolito -

Samplers read. The sample of Josephinite
is fine but there is no marked except
trace in your other samples,

~~I guess the Josephinite will not pass~~
~~a~~ I guess that hunting for
Josephinite is a waste of money
+ you better drop it.

~~described in the~~
~~the pyroclastic Murchisonian~~
~~you might go & see the also used~~
The ~~pyroclastic Murchisonian~~ R.

Edison

Notes by T.H.E.

Dec. 18, 1901

Wm Hampton Esq

The samples rec'd, except Josephinite
only contain a trace of nickel
Judging from the magnetic
sand & the Josephinite the
latter is so rounded that it
probably came from a distant
part. It looks like as if
a Nickel Silicate with Iron
had been reduced by forest
fires or lightning & eroded
& carried a long distance by
water = my impression

2. Hampden

is that it will not prove a
commercial source of
nickel ~~and~~ I thank you
very much for the assistance
you have given Mr. Bailett.

I hope some time to reciprocate
~~and expense~~ & hope when you
come to N York you will call
to see me -

Yours truly
J A S

CLARKE & CO.
Miners' Mining Stocks
and Investment Securities.
MEMBERS TORONTO MINING EXCHANGE
GLOUGHER AND MORENO & NEAL'S ODDS

TELEPHONE NO. 3441

OFFICE: 75 YONGE STREET
JAMES BUILDING

Toronto, Dec. 18th, 1901.

Thos. A. Edison, Esq.,
Orange,

N.J.

Dear Sir:-

*Received
Dec 26 1901
filed Nickel after answering*

I shall probably send
my man back to Sudbury
region in the spring if
may visit your prospects

We regret to say that shortly after writing you on
18th Sept. a contest arose over title to the Mergan Lots which is
not yet settled, and therefore there would be no use submitting same.
*you will stick to the
same as alternative*

We have however 168 1/8 acres, being the S. E. 1/4 of 8 and the S.W.
1/4 of 5, both in the 1st Concession of Denison Township, 1 1/4
miles from C.P.R. on which there are good surface indications.

We have also the South half of lot 9 in the 6th Con. Louise, 162 1/8
acres, 2 1/8 miles south of Dr. Mond's Smelter. It is at the northern
edge of the belt of Huronian quartzites, which runs south and ultimate-
ly form the LaLoche and other mountains near Georgian Bay. The
geological map of 1891, (Sudbury sheet) shows pyrrhotite on lot 8
in one Denison and lots 8 & 7 Louise, and diorite partly over on 8
Louise. It appears to break up here, but outcrops again in greater
strength than before, 1/8 mile further west on lot 9. There are
6 or 7 ridges over 100 ft. high with intervening valleys, all run-
ning westerly and stopping at the edge of a swamp 800 ft. wide, on
the other side of which the quartzite rises in great ridges. In
fact the quartzite nearly surrounds the whole diorite bodies, but
on the north east side the ground being low we could not tell what
the rock was. The basic eruptives however appear to have burst
through the quartzite just at its rim, and where it is disappearing
to the north. On the north and south of the diorite there are

CLARKE & CO.
Mines, Mining Stocks
and Investment Securities.

MEMBERS TORONTO MINING EXCHANGE
CLIQUEURS AND MOREING & NEAL'S ODDER

TELEPHONE NO. 2044

OFFICE: 75 YONGE STREET
JAMES BUILDING

Toronto, _____

- 2 -

dikes of diabase marked in blue pencil on enclosed sketch.

The southerly one is 150 ft. high, and 40 ft. above the diorite along its northern flank. The diorite (1800 ft. long) is 200 ft. wide before it falls into the first valley at the north. Apparently rising from this valley on the north east side of the diorite is quartzite mixed with felsitic material forming the wall of the diorite mass. Here where marked with X we found anhydrous iron oxide of a bright red colour. The rock underneath is considerably weathered, but it did not seem to turn into pyrrhotite. In places however it is broken up and falls down as if unsupported beneath.

At the edge of one of these drops we found what in the iron regions of Lake Superior is called "paint rock." It is green, red or yellow in places, and so soft and friable it can be dug out with a spade. It looks like the talcose selvage of a vein. It runs for over a hundred feet, dips under a thin sheet of overlying diorite and continues for the four or five feet we went down. The eruptions are here in great force, and there has been a lot of disturbance and metamorphism. The formation and surroundings are ideal. When discovered on 9th Nov. last we were not sure of getting title. There was a lot of "slash" left by the lumbermen which would not burn very well and we only cleared 1/8 acre and used picks and spades. There is always ore where the "paint rock" is found. It is diorite or diabase very much altered. We did not get through it and do not know its breadth or depth. We are 8 miles from the railway and 1/8 mile from the Vermilion River. There are several water powers on it. We will entertain a sporting offer for

CLARKE & CO.
Mines, Mining Stocks
and Investment Securities.
MEMBERS TORONTO MINING EXCHANGE
CLOUGH, AND MORRIS & NEAL'S ODDS

TELEPHONE NO. 3244

OFFICE: 75 YONGE STREET
JAMES BUILDING

Toronto, _____

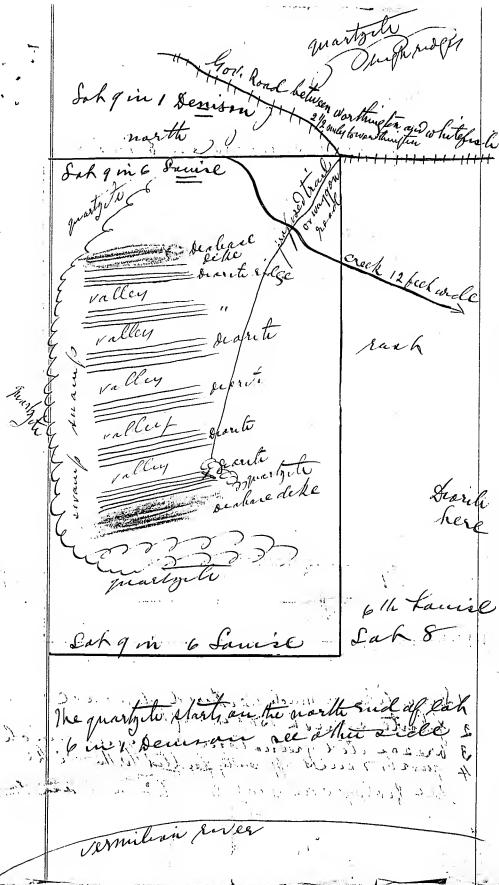
--88-- Editor

either or both these properties, but probably you would prefer waiting the result of operations in the early Spring. We can sell lots 6 & 7 Louis very cheap, but do not consider the show thereon very promising. There does not seem to be any contact or much disturbance. May we ask if you are returning to the district in the Spring?

Sincerely yours,

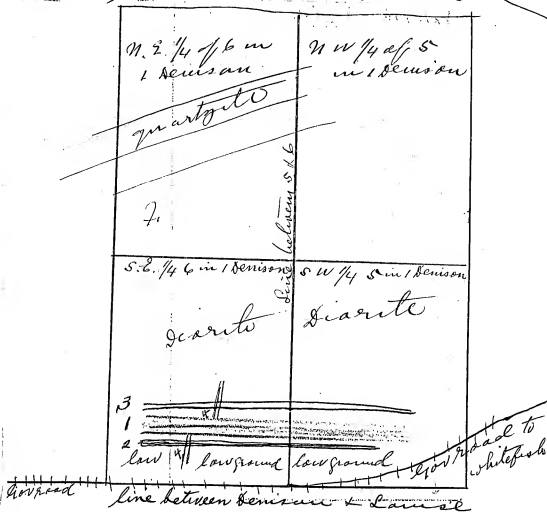
Clarke & Co

[ATTACHMENT]



C P R

second concession semiraw



- 1 Large dike of much weathered diabase so chain strong
2 white schist so few lumps
3 brecciated greenstone country much silica
4 quartz veins apparently faulted by the dike
see geological map in station 56

JNO ROGERS, NYS by YAE
 PRESIDENT AND GENERAL MANAGER

ARTHUR O. COCHRANE,
SECRETARY-TREASURER



Wine, Company, Limited

GRAND FORKS, B. C.

Dec 19

Answered
Dec 26-1961

I would like some information re your Electric Ore Separator, as I think perhaps it may be applied to some of our Ore in this Country viz. the "heavy Pyrrhotite" first have you patented the process in Canada. Second What you would sell the right for British Columbia for the Ores in question are very low grade. I would like to have a detailed plan of the process, also approximate cost per ton to handle and Briggitting, 100 tons per day or over if the plan can be successful there is a large field to operate in as much of the heavy Iron Ores here are below pay grade at present to send them without Concentrating.

Yours Truly Thos J Parkinson Esq B.C.



JOHNSON HOTEL

J. F. JOHNSON, Proprietor.

Corner First Street and Grand Avenue.

Losanmie, Wyo., Dec 20th 1901

Mr. Thomas R. Eliason.

Orange, N.J.

Dear Sir:

From what I have seen in some ore from some mining claims I think I can secure you some good nickel prospects. I do not intend to let owners know the value of their ores as all prospect owners are prone to ask a high price for a prospect, especially if they know they have some ore of value in their land. Please advise me as to how low grade % nickel you can handle with profit or that you wish to secure. My regular commission is 10% of purchase price and I always get the option at the lowest possible price and on best terms. Think there can be properties secured on working bond giving the purchaser a chance to prove depth of ore body. Can send you samples from time to time if you wish but now is a good time to secure options before Spring opens up as they can be secured for more reasonable figures. I have two samples here



JOHNSON HOTEL

J. F. JOHNSON, Proprietor.

Corner First Street and Grand Avenue.

Laramie, Wyo., _____ 190__

² that I took from two different properties. One carries nickel, the other I think runs well in platinum and may carry some nickel too. Could not send them with the box of samples I sent you yesterday. I am posing as an ordinary prospector so that no one will know my business.

Most Cordially Yours,
A. R. Halls.

Reference, W. L. Vail Pres. 1st National Bank
Durango, Colo.

C. E. McConnel Pres. Smelter State Bank
Durango, Colo.

W. W. Cramer, Mine Owner and Merchant
Telluride, Colo.

W. H. Hays E. M. Laramie Wyo. Co. Monarch Coal Co.

W. R. West, Pres. Carbon Co. Cold M. Co.
Laramie, Wyo.

Revised samples from winter
Lab. Sample # 28

*Agnewed
Jan 7-1901*

THE SOHO GROUP OF MINES
KARLO, B. C.

Thomas A. Edison, Esq.

*Sample 79 do not
think ore would improve
in depth, the best Karlo, B.C.
as my for pure pyrite
was one quarter of
percent*
Dec. 23, '01.

Dear Sir, I am going East shortly as far as Montreal in connection with our mining interests here. You say you have found my property upon examination to be of large body of magnetic pyrites, containing small quantities of nickel. I have always felt that with depth that property would improve in value. The Copper Cliff and Stobie mines increased in metallic values as depth was obtained, so did the Evans and other mines in the vicinity. My experience in the Boundary country here gives me still greater confidence in that class of ores. It too is a diorite formation and a magnetic pyritic ore precisely similar to my property. The total value of that ore is \$5.00 per ton in copper and gold. It is a self fluxing ore and is smelted for the extraordinary low rate of \$1.40 per ton at their Granby Smelter at Grand Forks, B.C. If you can see any way to utilize this ore at a profit I will give you liberal terms, reasonable conditions and prices, and will go to Orange to personally arrange contract and details. Would you kindly send me the result of your analysis of the ore and the total in values of all the ore contained therein. By so doing, with an early reply, you will very much oblige.

Very Respectfully Yours,

J. C. Ryan

[ON BACK OF PRECEDING PAGE]

J. ~~W. H. H.~~
Johny giving letter to
me to sign
Write & say that the
prospects do not
warrant the payment
of any such amount
of money, I would however
pay one hundred & twenty
five dollars ~~for~~ to
reimburse him for any
~~work~~ prospecting work
he may have done

{

THE LAUREL HOUSE

LAKEWOOD, NEW JERSEY

DAVID B. FLEMING, MANAGER

A. J. BURDETTE, ASSISTANT MANAGER

A syndicate purchases the Lawrence
Cement Company's Properties

Kew-Forest, N. Y., Dec. 28.—The vast cement properties of the Lawrence Cement Company, consisting of about a dozen mills, and a score or more of quarries have been acquired by a syndicate, headed by W. M. Bush of New York, who owns a large cement making plant near Elmira, N. Y. Possession will be taken on Jan. 1. Negotiations for the securing of several other plants by the syndicate are pending which will entail the large expense that has been heretofore incurred in the sale of the works in New York. Hereafter all sales will be through one agent, who, it is said, will be W. M. Bush.

Dec 30

1901

Dear Mr. Edison,
I called at Stanton's
office today in re Mercury. Stanton
was not there so I left word,
asking for appointment.

This is to call your attention
to a pamphlet on nickel which
I am sending you, and which
I fear ^{might} be buried under
the many pamphlets you must
peruse.

May you and your family
have many happy new years.
My respects to Mrs. Edison
Dear
Faithfully, G. East.

[INCOMPLETE]

Whereas Thomas a Edison of Orange in the state of New Jersey USA Inventor, has applied to the department of Crown lands for ^{a temporary lease} permission to explore for minerals ^{and} upon certain lands in the Sudbury district of Ontario and in the event of the discovery of valuable minerals, provision for the purchase or lease under the mines act. & amendment thereto of such portions of said area as he may after such discovery select for the purpose of development provided such exploration and application for ^{permanent} lease be made or purchase be made before the first day of December Nineteen hundred and two made within the time limited as hereinafter set forth

And whereas it will be an advantage to the province to encourage such exploration of mineral or the investment of Capital, Employment of labor & development of mineral resources which will result therefrom -

[INCOMPLETE]

and whereas the said Edison has already expended a considerable amount of money in the perfecting of Magnetic apparatus for the training of experts for prospecting & has employed a number of experts with prospecting apparatus in the Sudbury district to familiarize them with their duties, and ~~has~~ agrees by the acceptance of this ~~license~~ ~~temporary~~ lease to employ such a number of experts as will be sufficient to make a complete Magnetic survey of the territory leased or licensed to him during the period of such lease - and furnish a copy of all such Magnetic surveys to the Geological Survey for future use of the department -
Now therefore know all men by these presents that the Hon^{ble} Commissioner of Crown

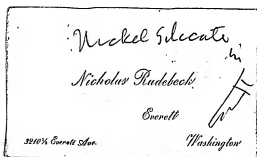
lands for the province of Ontario, do in consideration of the Premises and of the agreement afore said to comply with the

This man is in charge of
Washington Electric Supply Store
has a no id of automobile & license
not taken up - will correspond
with me - or Stumpen -

Riddle's Homeless, owned by
International Mutual Co.
promising to offer Chicago address
man in charge of mail at
Riddle's - Smith of R.D. Co.
another man, this Proctor goes
Oakland Cal

5 in SW Riddle's Douglas Co
American Mutual Bank
office Chicago got window
bank of Glencoe, Ill.
Glencoe & give their name

[ON BACK OF PRECEDING PAGE]



[BY JOHN V. MILLER]

1901)

-- NICKEL :-

-----oOo-----

Location of Sources :-

New Caledonia, - Silicate of magnesia and nickel - leached out of serpentine and caught in clay lined cavities, picked up to 7% Metallic Nickel, quantity large, of this grade, much larger quantities could be got if picked to 5% - Deposits only one to four miles from tide, freight to France unknown, - Climate unhealthy, Labor expensive even with convicts. Ore refined by smelting also by crushing and leaching with acid - gives purest nickel in the market - Two French Co's. own the deposits, - One Company I am told and its believed both are controlled by the French Rothschilds, - product marketed in this Country by the U. S. Metal Co., The Lewisham and Standard Oil Combination, who are also sellers for the Amalgamated Copper Co. - price cube nickel 55¢ F.O.B. New York, spot cash.

Several boat loads of New Caledonia ore have recently been bought by the Oxford Copper Co. and refined at their plant on Staten Island, it was 7-1/2% ore - price paid unknown.

The next deposit is the Sudbury region of Canada, - province of Ontario just north of Georgian Bay. Nickel occurs in Magnetite Pyrites, pyrrhotite along with Copper. There is an area of Cambrian rock about 25 ^{miles} wide and 40 long - a circle around this formation of granite contains diorite, at the juncture or contact of the diorite and granite large bodies of the pyrites occur at intervals all around the circle. There are over 50 such deposits known, they are discovered by noticing the gossan of red oxide of iron formed from the decomposition

of the pyrites, - all deposits known are on outcrops, two thirds of the area is covered - and deposits can not be discovered in this manner.

The deposits effect the dip needle almost as strongly as magnetite deposits. There are only two concerns operating in this district, the principal concern is the Canadian Copper Co. This Company have a majority of the best mines so far discovered; the other concern is owned by Ludwig Mond of Brunner Mond & Co., the great Soda Works Co. of England. Mond is one of the greatest industrial Chemists living, some years ago he discovered a remarkable chemical compound called by him Nickel Carbonyl - Carbonic monoxide passes over metallic nickel at 62 Centgrade forms very volatile compound, this compound is decomposed into Carbonic monoxide and metallic nickel at 222 Centgrade; his process is now in operation at Chesswick England.

Within the last year he has bought for cash several mines in the Sudbury district, his principal mine is the Victoria, the way he bought this mine is peculiar;- He allowed \$8000 to the owners to diamond drill it they were to get their asking price, to wit, \$200,000 providing the drill proved up 200,000 tons of ore assaying two and three quarters per cent Nickel and the same in Copper. The drill did show this amount and he bought it, other smaller mines have been drilled and acquired - At Victoria mine station on the Soo branch of the Canadian Pacific R.R., Mond has erected a smelting plant,- the ore from the mine is brought to the smelter by wire rope conveyor three miles long. This Mill has been in operation two months, - the expert in charge is a Mr. Hixon formerly with the Anaconda Copper Co. at Butte, Mont. He is having considerable trouble not being familiar with Water Jacket Smelting with the peculiar ores of Sudbury district, I noticed his slag pile did not

contain over 300 tons, the method is to mine, Cob the ore, crush to 2 inch size, then pick on picking belt, then roast in heaps, - these heaps contain I should say 2500 ton. On the level ground is laid wood two feet deep over the wood the coarse ore is piled, on top the fine ore is placed, the wood is fired, - several weeks and sometimes months is required. The Sulphur is brought down to 7%, at least that is what they try to bring it to, as it frits together, it has finally to be blasted out by dynamite. The ore is brought from Mine to roast heap by cars, shoveled out to wheel barrows and carried to heaps and when roasted and broken up is again handled by wheel barrows.

Mond makes an 80% Matte which he ships to England to be refined by his new process.

The Canadian Copper Co. is quite a large concern, they have about 10 Water Jacket Smelters, they have from 15,000 to 25,000 tons roasting at once, the whole affair is a wheel barrow proposition.

In all my experience I have never yet seen or imagined such a works where every thing is done by hand and nothing is worked by machinery.

As near as I could learn they are mining and smelting 800 tons of ore daily which will average 2-1/2% Nickel and 2-1/2% Copper, - The Matte they turn out contains about 20% of these metals. The Matte is broken up, weighed and loaded on cars and shipped about two miles to another Mill owned and operated by the Oxford Copper Co., here it is crushed and re-roasted and rematted to 80% of the two metals and then shipped to the refining works on Staten Island. I understand the Canadian Copper Co. has a contract with the Oxford Co. to take all their product on the basis of 12 cents per pound for the nickel in the 20 per cent matte and

7 cents for the Copper. This contract has been renewed for another term of years on a higher plane of prices, I am told that it is 9 cents for Copper and 16 cents for Nickel, but I think this is only a guess on the part of my informant, I was also told that the Carnegie Co. had a contract with the Canadian Copper Co. for a period which will expire in 3 years and that they pay 35 cents, this is probably guess work.

I pay the Oxford Copper Co. 55 cents for nickel, as this is the price of French Nickel which pays 5 cents pound duties, perhaps there is some understanding. I have also ascertained that the Amalgamated Copper Co. of New York, the City Bank Concern owning the Anaconda Mine, has an option on the Canadian Copper Co. for 6,550,000 and that two Anaconda Mine Engineers are at Sudbury now looking over the mines. The option price is based on the Concern as a going one with very great earnings. The mines contain undoubtedly enormous amounts of ore. One mine the Copper Cliff is down 1400 ft., so I am told by one of the miners, but Company would not let me down. It is probable that the option will be exercised and as the selling Copper for the amalgamated Company is also selling Company for French nickel it would appear as if there was some combination in progress - to control the output of nickel. This would be easy as I was told yesterday by Sheriff Lawrence who is now in this Country that Mond brought out a public Company the day he left. This stock would be acquired and the combination made complete.

I originally visited Sudbury just to see if there was any probability that these nickel deposits would be exhausted in the near future, and learned that if present consumption does not increase the known deposits would last for many years, but if the present rate of increase keeps up they will not last long. I also learned that the dipping needle had never been used for discovering ore where the rocks were covered by

soils or swamps; thereupon I had sent from the Laboratory seven dipping needle men. These with myself outfitted and started into the woods in the nickel belt. We made magnet surveys of six mines and after the men were expert I left them and returned to New York. They have a map of all the unpatented property on the belt, and will probably be able by November 15th to cover one-fifth of it; next year from July 1 to November 15, with sixteen needle men I hope to cover it all. We shall undoubtedly locate a number of deposits on covered land. When one is discovered, application for a lease is made to the land Commissioner at Sudbury, who is now my agent; sixty days is allowed before first payment is due; this payment is one dollar per acre, and thirty cents per acre per year for such a number of years as will amount to three dollars and fifty cents per acre, or the whole can be paid at once and the land patented. I have also applied to the Commissioner of mining of Ontario at Toronto for a lease of 18000 acres of land on the nickel belt from July 1 till December 1, 1902, without payment so as to give me time to make the surveys, and I have very good reason to suppose he will grant it. This will prevent anybody next summer from copying our idea of locating by dipping needles.

In addition to this, I found that the owners of known mines had never heard of the royalty per ton idea; they have set prices on their mines which seem high as no company would erect a smelter on a single mine - they have got them in groups and brokers offer each group at prices. The Canadian Copper Company have used the original locators very badly, obtaining their best mines for a mere song through legal flaws, etc., and the people are very suspicious of the Company in every way.

After telling them that I was not a seller of nickel but a buyer and explaining the royalty basis, I have finally got them around to say that they will deal with me on the royalty basis - for instance one set of men own three mines. They are very large mines, and I think contain

very large bodies of ore running $3\frac{1}{2}$ per cent nickel with only two-tenths per cent copper. They agree on one dollar per ton royalty per ton of smelting ore with a minimum equal to 100 tons of ore daily, and an option to buy at \$300,000 at any time, this being the price the properties have been held at for some time. I demurred to 100 tons as a minimum and said that I thought we might do business on a basis of 50 ton per day out of the mine. I think they will accept this proposition, and I think I could tie up all of the best deposits on this basis.

This would be a very good method as there is no investment except in a small plant for concentrating, and if the mines after being worked show up the ore claimed by the proprietors, I could exercise the option or draw out with very little loss. I shall probably close with some of the parties providing I do not find what I want with the men in the field.

The battery Company at first will only want 1000 pounds daily of nickel but I am sure that within two years this amount will be several times greater. I have written these facts with an idea that perhaps the steel company would go in on joint account, so that with a larger output the price per pound could be lowered, but the battery company would not like to make a greater investment than \$40,000, and if the Steel Company wanted to invest - say twice that amount, I would be willing that the nickel should be divided in proportion to the money invested, and any excess not wanted, to be marketed on joint account.

OTHER DATA.

Roasting of ore done by contract about thirty cents per ton; Copper Company furnishes the wood. Wood \$2.50 per cord. Coke \$9.00 per ton.; freight high on railroad; Drill runners \$2.25, assistants \$1.75; common laborers \$1.45; Coal \$5.00 to \$6.00 per ton; living somewhat high.

Following are some of the companies owning mines, but not operating. :

Dominion Mineral Company, Montreal concern, several small mines; Worthington Iron ore contains five to 6 per cent nickel; shaft down two hundred feet; needle calls for a large amount of ore; company mismanaged; have no money and less brains.

Nickel Copper Company, Hamilton, Ontario; have several mines, one a very large one but too far from railroad; to be available just now; this company has been very badly managed; they had just opened one mine when I was there; there was lots of ore in sight; it assayed at Lake-torney 4 1/2 per cent nickel, 2 per cent copper; they had not paid their men for July, so men quit; understand company has no money and will probably go bankrupt; been ruined by process, men and bad management.

Great Lakes Copper Company, owns some fair copper deposits out side of Nickel Belt and one neckal mine in the belt; saw some false and exaggerated reports by experts on this mine, but needle didn't call for a large amount of ore as I surveyed it.

The Sultana Mine is owned by Chicago Company, the name of which I cannot learn as it had been changed frequently for re-organization purposes. This is a very fair mine but has been grossly mismanaged; mine had just been pumped out for inspection of some Chicago capitalists of the variety that brings special cooks and provisions; they visited

the mine, didn't go down the shaft and left; capital blank millions all wind.

The Algoma Nickel Company has one mine and some prospects; There are several other small companies owners of small mines and prospects.

In addition to these companies, The Clergue Syndicate of Sault Saint Marie has built a railroad for a short distance along the nickel belt; Clergue has bought one mine called the Gertrude. This mine which I did not visit he paid \$100,000. Clergue told me the ore averages five per cent nickel and only two-tenths per cent copper. This is disputed at Sudbury. They say it is only three per cent of nickel. I guess the latter assay is nearer the truth. Clergue has also acquired an option on the Elsie Mine for \$100,000. This mine I visited; he had a very good man from Michigan mines in charge. A diamond drill was at work and in the right place too, according to the needle, which is something unusual up there. I saw exposed a body of solid ore without gangue 30 feet wide and about 100 feet long, which was as far as it was stripped; in addition there was fifteen feet of ore mixed somewhat with gangue. I think this a fairly good mine.

I visited Clergue; saw his works at Sault Saint Marie, Ontario. He is of the Cecil Rhodes type and has large ambitions; he is putting up a steel works; he is going extensively into nickel steel; he has a process of making ferro nickel.

It is this - The nickel pyrites is brought from his mines above mentioned to the Soo. They are ground with Rolls to 40 mesh. This is roasted in closed roasters; the sulphurous gas is used to bleach wood pulp and also he proposed condensing it in cylinders. The sulphur is brought down to half per cent. This Blue Billy he smelts in an electric furnace to Ferro nickel. He has a 45000 horse-power plant on

Canadian side in operation, running paper pulp mills, machine shop, soda works &c. and has nearly finished a very large canal on the American side giving 35,000 horse-power more - I am doubtful about his nickel process.

The third nickel district is that of Norway; the nickel being found under the same conditions as at Sudbury, but the deposits are small and the annual output inconsiderable compared to Sudbury. I learned that the buyer of the Oxford Copper Company acquired the coming years output of these mines. I also learned that Major Lecky of the Canadian Copper Company has just returned from the mines of New Caledonia - altogether there seems to be a community of interests forming in the nickel business.

In Oregon near Riddles, there is a serpentine belt from which a silticate of nickel and magnesia exudes, and there is a large quantity of low grade ore in sight, but no economical process having as yet been devised, the Companies who own the property have bankrupted. I intend to send a man out from the Laboratory to look at it, but as it has broken a number of companies I surmise that nothing will come of it, as far as I am concerned.

This gives all the deposits of nickel worth anything.

**Mining Exploration Company of New Jersey and Related Records
Thomas A. Edison Files - Correspondence (1902)**

This folder contains correspondence and other documents relating to nickel-bearing properties in the Sudbury district of Ontario, as well as in Arizona, Connecticut, Oregon, Pennsylvania, and Australia. Most of the letters are to or from Edison, John V. Miller, or John F. Randolph. Many of the letters to Edison are field reports from John V. Miller. Also included is correspondence from John T. Hubbard, an attorney in Litchfield, Connecticut, with draft replies in Edison's hand; and a 16-page report of prospecting work performed during the fall and winter of 1901 in Ontario, Connecticut, and Pennsylvania.

Approximately 50 percent of the documents have been selected. The unselected material includes routine correspondence regarding stock transactions, mining properties, mineral assays, and unsolicited ore samples; letters from Miller concerning his accounts or whereabouts; and a prospectus of the Sudbury Power Co.

DEALERS IN MINING CLAIMS.

RATH, WOODOCK & CO.

PROSPECTORS

THE CARIBOU MINES.

August 2nd 1892
Miller - Look in
boxed box see if
Loring P.O., Ont. January 6, 1892.
I got letters if
bring to me.

Mr. Thomas A. Edison
Orange, N. J.

Dear Sir:

Some time ago I send
to you, maps, report and several ore
samples.

Kindly let me know, if you re-
ceived them, not hearing from you
I thought perhaps they might have
gone astray.

Our map of the township of
Hardy, including Indian reserve
South of the French River I will send
later on, I mention Indian Reserve
because it has been heretofore impossible
to prospect on their possessions, but
I expect their permission next season
and look forward to some interesting
results.

Hoping for an early reply

I remain

yours Respectfully

William F. Rath

W. F. Rath

[ON BACK OF PRECEDING PAGE]

Write & say that my
Representative will come
& see him in the coming
summer & talk matters

over with him
Samples if sent ~~could not be~~
identified probably
marks obliterated
You might duplicate
samples

B
.. Hotel Josephine ..

GEO. E. GOOD, Proprietor.

file
Grants Pass, Oregon Jan. 7th 1902.

Mr. Thomas A. Chisum
Orange, N.J.

Dear Sir:

I received your letter about 5 days ago wherein you advise me to stop looking for the Josephinite and on which line it was my intention to write about as soon as a letter from you reached me advising what the samples contained.

The weather at this season is too wet to do anything.

Have also learned that this Josephinite has never been found larger than a marble and no one has seen so very much of that. Experienced men seem to think that it is in small streams in the rocks and there is no large quantity of it.

.. Hotel Josephine ..

GEO. E. GOOD, Proprietor.

Grants Pass, Oregon,
Jan. 2

1902

Several people have looked for it and never found any.

Mr. Hampton is not one bit discouraged and still thinks large quantities of it are there and can be found upon investigation. Of course it is a question still to be solved.

Under separate cover I am sending you a few sample which was obtained during my last stay at Kerby. These are said to be malleable having been pronounced so by a government man traveling through this territory. To my knowledge no analysis of it has ever been made and this is all that is known of it. There is quite a ledge of it and is being opened up. It will be for sale and

Headquarters for ~~Engineers~~ and
Mining Men.

..Hotel Josephine..

GEO. E. GOOD, Proprietor.

Grants Pass, Oregon,
"3

—190

shop at that. I hope it contains
the material you are looking for.

In the morning I leave for
Phoenix Arizona for very much
needed repairs and will send
in my cash report and balance
from there.

If anything turns up while
there will let you know.

Yours very truly,
Frank Cobble

Uncovered
Jan 11, 1902
Dear Mr. Edgson

Christiana Pa. Jan. 9, 02

Joined upon the scene of work Tuesday morning and immediately started work visiting the Gaff nickel mine & the surrounding country. The country is almost entirely farm land and so far I have found no distinct outcrops except top of sandstone in cuts along the roads. Along the line of the trap dyke shown in the geological reports I can find only boulders and no definite outcrop. The rock of these boulders is more like diorite than trap so far as I have seen.

The rock immediately around the mine consists of horn blende mostly and this body, according to the maps, runs in an E & W direction while the dyke runs N.E. Between the two there are sandstone boulders.

Being to the great scarcity of outcrops of any kind, and the uncertainty of the rock formation, I am some what doubtful about what I should do. And also we have had about two inches of snow since yesterday morning with prospects of more.

Will you kindly advise me in regard to the matter, whether or find your way on to run lines over this line of trap boulders, which the natives say appear irregularly for many miles, or return.

I am sending you samples of these trap boulders gathered near Georgetown, less than a mile from the mines. Also samples from rock (float) found in the fields and roads around the mines. Two preliminary samples from dumps at the mines.

You can reach me by telegraph
addressing message to Georgetown
Hotel, Georgetown, Lancaster Co., Pa.
near Lancaster.

Yours sincerely
John V. Miller

Make a rough survey
of the mine & then survey
the continuation of the
mine at both ends for
say $\frac{1}{2}$ mile to see if
there is anything left in
old mine & adjacent deposit
along the strike. 2

CLARKE, BOWES & SWASEY.

Haroldston, Solicitors, &c.
THE MAIL BUILDING,
KING'S ARMS AND BAY STREETS.

J.B. CLARKE & L.
CUMBERLAND

H.B. BOWES.
C. SOUTHAMPTON.

Telephone: 97 403
DUNDEE, DUNDEE.

answered Jan 30 - 1902
7/15
Toronto, Canada, Jan. 11th., 1902.

Thomas A. Edison, Esq.,
Menlo Park,
New Jersey.

Dear Sir:—

Would like full information as I intend sending some of my men to Sudbury this coming summer.
I have been informed that you are, through your agents, looking for mineral properties in the Sudbury District. I have for sale the following properties.—

520 acres in the Township of Blezard, assays show 82 lbs. of copper to the ton and 48 lbs. of nickel. Another assay shows 58 lbs. of copper and 35 lbs. of nickel.

Another property is in the Township of Salter and contains 159 acres. Various assays show from 12 to 18 lbs. of nickel per ton and from 16 to 120 lbs. per ton of copper.

Another property is in the Township of Baldwin and contains 87-1/4 acres. Also another in the Township of Hallam shows an assay of large quantities of nickel per ton.

I also have another property in the Township of May containing 240 acres, with a strong showing of hematite iron.

If you desire further information respecting these properties, I will be very happy to furnish it.

Yours truly,
[Signature]

J.P.

Mr. George

note
Miller he better come in and visit with
Georgetown, Lancaster Co. Pa. matter new

Mr. Thomas A. Edison.

Orange, N.Y.

Dear Mr. Edison:

answered Jan 17, 1902

To explain more fully than in my
letter of the 9th the condition of the country and
the Mines in this vicinity, I write the following
report.

Being unable to find out in Philadelphia the
exact location of the Lep Nickel Mines and the
nearest railroad connections it was necessary to
first go to Lancaster, where we arrived Monday
evening. Tuesday morning we came out to Georgetown,
a short place on miles from the Nickel Mines,
via railroad and carriage.

The six mile drive from the railroad showed
a country consisting almost entirely of farm
land with partly rolling hills or uplands. No
distinct outcrops were seen and the difficulties
of carrying on the prospecting work was somewhat
evident.

The Lep Nickel Mines, owned by Joseph Sharton, are
located five miles from the R.R. Railroad in Bart
Township, Lancaster Co. and in a shallow valley

about one mile north of Georgetown. The rock ingo extend over an area about 1500 feet E & W and 300 feet N & S. The mineral bearing rock of the mine consists almost entirely of horn-blende and is quite different from the diorite of Canada. The country rock, bordering on the north and south the horn blende or mineral bearing rock, is quartzite or sandstone, as shown by the rocks in the gullies and one "showing" on a road cut. About $\frac{1}{2}$ mile to the SE is a dyke of diorite or trap rock running NE and SW - as revealed by boulders, some of which are quite rounded while others are sharp edged.

There is no surface showing of gooson about the mine and if there was it has been covered by buildings, dumps, etc. In one excavation, however there is a showing of gooson, which does not come to the surface. It is quite thick and deeply stained. The depth of the rock ingo runs considerably, the maximum being about 200 feet. The mineral bearing the nickel is mostly Millerite.

The last rock dome at the mine was about two years ago when the "New Shaft" was sunk some 80 or 90 feet. It is said that very good

our ^{own} found, in fact better than any other strike. However work was abandoned at this depth and no work about the mines has been done since. It is reported that the cause of stopping the work was that great quantities of water was pouring in from the other workings. A rough survey was made about the shaft covering an area about 300 feet square. The highest attraction found was 18, the magnetic showing being quite poor.

The country to the north east of the mines following along the dyke has been examined from a buggy for several miles and the gently rolling level land continues. Only a few outcrops were found and as far as I examined it is almost impossible to determine at all accurately the character of the underlying rock. The geological maps at hand are on too small a scale to be of any practical value in running cross lines. I have written to the state geologist for maps but until yesterday was unable to get track of one on large scale. There is a large atlas of geological maps of southeastern Pennsylvania and of print I had a copy of which I can procure from a dealer. This may aid the work considerably.

The dyke near the mines, as shown by the boulder, is partly along a ravine and partly along a ridge. The rock seems to be diorite, very similar to that of Canada, and fairly coarse, but at a distance of quarter of a mile or more to the S.E. a few scattered rock have been found of finer grain. I have been unable to find the hornblende rock of the mines any place outside of the immediate workings of the Gap Midge Mines.

You said, before my leaving Orange, that you thought it unnecessary to follow along the dyke. As the dyke rock is diorite or very much like it and the dyke is the only line I can follow at all, I am somewhat doubtful as to how I should proceed. Will you kindly inform me whether or not you wish me to survey along the dyke, although we cannot be at all sure of the contact nor the underlying rock.

I have surveyed some of the ground to the west of the Atherton property along the line of the body of hornblende rock but have found no attraction. Also we have started to survey along the dyke near the mines. I shall ex-

arrive tomorrow the country to the south west and if different from this vicinity and we are able to follow more surely the rock formation we shall survey in that vicinity otherwise we shall continue the work as begun here until I hear from you.

Send you by Adams Express on the 9th inst. the following samples.

- #27 - Taken from flood rock along fields and roads around the Gap Nickel Mines.
- #28 - From dumps at Gap Nickel Mines.
- #29 - From dump of "Lost Shaft" at Nickel Mines.
The shaft is a trail to the west of the line of workings.
- #30 - From boulder along trap dyke near Swampton.

I would very much like to know the result of analyses of the last lot of samples from Sitchfield.

Yours sincerely,
J. B. Miller.

CLARKE & CO.
Mines, Mining Stocks
and Investment Securities.
MEMBERS TORONTO MINING EXCHANGE
CLOUGHES AND MOREING & NEAL'S ODDER

TELEPHONE NO. 2244

OFFICE: 75 YONGE STREET
JAMES BUILDING

Toronto, Jan'y 15th, 1908.

Thomas A. Edison, Esq.,
ORANOE,
N.J.

Give to John Miller
9

Dear Sir:-

Replying to your esteemed favor of the 28th ult. if you will kindly let us know a few weeks before you intend to be in Sudbury, we will give you a written option at a stated price on any properties we then have for sale. In addition to those mentioned in ours of 18th ult. we now have the S $\frac{1}{2}$ of 12 in the 5th Con. Denison. This you will see by the geological map is right in the nickel belt. The rock all over it being identical with that round the Vermilion and Victoria Mines. We have discovered a lot of "float" but no outcrop of ore in situ as yet. There are 235 acres all wooded. We have a good waggon road on to the lot and buildings including office, blacksmith shop, sleeping and cooking camps. The Mond Nickel Co. have nickel on the North ends of 11 and 12 in 4th Concession within 500 feet of our lot. It would be a good place to use your instruments. It is 4 $\frac{1}{2}$ miles from Victoria Mine, while the M. & N.S. Ry is located across the N $\frac{1}{2}$ of the lot.

Very truly yours,

Clarke & Co

JOHN T. HUBBARD,
ATTORNEY AT LAW.

Pitchfield, Conn. January 17th 1902.

Mr. J. V. Miller,

Orange, N. J.

Dear Sir:

The papers which you sent
back to me were duly received.

I enclose newspaper clipping of article on
drowning road - You need not return it.
I found out that the Canal from the river below
King mill in the Pitch, was as we conjectured
used for irrigating the meadow by the reser-
voir and not in connection with mining.
The mining done there must have been in 1849
& was the work of New Jersey parties, apparently.

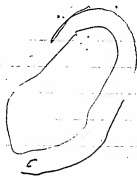
I have read of a new method of locating
mineral deposits by means of a galvanometer &
a portable battery - You doubtless know of it.

If you have assayed any of the specimens
which you took from here I should like
to know the result. Truly Yrs. John T. Hubbard.

[ON BACK OF PRECEDING PAGE]

J. T. Hubbard

1 Cook — 3
 4 packers — 6
 12 needlemen — 22
 Miller — 5
 1 Box Needlemen — 3



\$10,000 —

21
 14
 5
 70

19
 133

11111

26
 130
 910

12/365/30

[ATTACHMENT]

All of the samples were assayed
~~and~~ they combined gave traces of
Nickel & Cobalt up to 1.12 percent
Mr. Edson does not think these grades
~~was~~ or the quantity would be sufficient
to make it pay but thinks that
by prospecting over a considerable
area that possibly better deposits
might be found & he thinks of
sending up in the spring a party
to cover a considerable area.
He would like to know how land
titles are in that region if good
titles could be obtained
for instance The Buck, Grannis
Johnson & Pool Mines. How much
could these deposits be obtained
for say 20 acres ^{of land with} each &
what kind of title could be had

Georgetown, Penn.

Jan. 17, 1904-

Mr. T. R. Edison,

Orange, N. J.

Dear Mr. Edison:

Since my last report of Jan. 12, I have examined the country to the W and SW of the Gap Nickel Mines and have found two localities where horn-blende boulders and shist appear. Have also followed along the trap dyke for some three miles to the SW, the only indications being small patches of boulders varying from a quarter to half a mile apart. The line of contact cannot be definitely determined.

The field of horn-blende boulders is about one acre in extent and is situated one mile west of the Gap Nickel Mines in the same valley. It is located in the Tender Field, by which name samples and burners are marked. Two shafts have been sunk here about 90' deep, one in the midst of the boulders, the other some 500' north in a cleared field except for the dump - and a few boulders close around the shaft. The boulders are similar to those at the Nickel Mines and the dump of the northern shaft shows massive horn-blende and greenish shist. An old miner said that the shist was found on the north side of the shaft. 200' beyond

both shafts are indicators of sandstone. There is no surface showing of gossan above either shaft. From surface indications there is no connection between this field and the Nickel Mines as numerous sandstone boulders are found over most of the distance.

A survey was made about the shafts extending half a mile E & W and quarter of a mile N & S, with 100 ft. line N & S and 20' readings. Two places of small attraction were found, one close to each shaft, which is some what peculiar. Detailed surveys were made at these places, maps of which are enclosed.

A very small outcrop of greenish or hornblende schist was found about one mile west of Forgetown in a small settlement, named Mount Pleasant. It is on the summit of a ridge, some 1100' NW of the trap dyke, and has a strike of a few degrees N of E. Another small outcrop farther east would indicate that the schist continues to the dyke. According to report greenish mica schist borders the hornblende rock at the Nickel Mines. On account of this and on the supposition that the hornblende rock is covered over we are making a survey of the vicinity.

Upon the completion of this we shall more further north along the trap dyke and examine the country for hornblende rock. Our headquarters will be

Quarryville, Lancaster Co. Penn.

The work has progressed rather slowly owing to the great lack of outcrops and the difficulty of finding what there are. I understand that the country to the south is more hilly, which will be a great advantage.

Will you kindly have sent to me by Adams Express to Quarryville the following —

The Penn. Geological Report on York County.

100 Small size sample bags (Find some in library)

On Jan. 14th the following samples were shipped —

#30 - Special sample from dump of Gap Nickel Works.

#32 - From dump of "The Shaft" " " "

Rough survey made about this shaft.

#33 - From dump near pump house " " "

#34 - Probably mat found at mouth of " " "

#35 - General sample of rock on fields to east of " " "

Collected by surveyor.

#36 - Hornblende boulders on Tonder Field.

#37 - Taken along trap dyke SW of Nickel Mines.

Tomorrow the following will be shipped —

#38 - From dump of Northern Shaft - Tonder Field.

#39 - From surface rock above Northern Shaft - " "

#40 - From hillside and outcrop - Mount Pleasant -

Yours sincerely
J. V. Miller.

C. W. PETERSON,
2419 PRAIRIE AVE.,
CHICAGO, ILL.

Chicago Jan. 17th, 1902.

Thos. A. Edison Esq.

Orange New Jersey.

Dear Sir:

You wrote me on the 9th. of Nov. last in regard to my former letter, placing before you for your consideration the Oregon Nickel property. I answered your letter on the 12th. of Nov. and I have no reply to my letter. The letter may not have reached you. I would however be glad to hear from you and have if you are interested in acquiring a nickel property either the Oregon or some other. I have some others, some in Canada.

Yours truly,

Chas W Peterson

*Say I am not interested very much in
Oregon Nickel mine as I have had
considerable experience in mining the
ore I am more favorably inclined
to the Sudbury Ore*

Edison

WM. WHITE, JR.
CONSULTING ENGINEER
PITTSBURG, PA.

*Approved
Jan 30 1902*

Pittsburgh, Pa. January 22, 1902.

Thos. A. Edison, Esq.,
Orange, N. J.

Dear Sir:-

Some clients of mine own nickel properties, one of which is in the Sudbury district, the other is in Arizona. The ore in the Sudbury property is of the standard composition of that district, a compound of ore, nickel and copper, carrying about 3% of metallic nickel.

The ore in the Arizona property, chiefly from surface workings, which can be followed some 6000' contains 2.768 metallic nickel and .248 copper, the balance being sulphur, silica and iron.

It occurred to me that perhaps you might be interested in this subject, and if such is the case, if you will be kind enough to advise me, I will be glad to give you all the details.

Hoping to hear from you, I remain,

Yours very truly,

Wm White Jr

*I am interested in
Nickel Mines give me
more information*

E

PERSONAL.

SUBBURY, JANUARY, 22, 1902.

THOMAS A. EDISON, ESQ.,
ORANGE, NEW JERSEY.

*Answered
Jan 30-1902*

DEAR SIR:-

When you were here last summer I had several conversations with you regarding certain properties of mine in the Township of Howell, viz Mining location W.D. 38, W.D. 229 and W.D. 230 all of which lie together. At that time and shortly before you left you took samples of W.D. 229. Up to the present I have not heard from you as to whether you intend doing anything in the matter.

I am in a position now to place a sale and I should like to hear from you as soon as possible if you wish to do anything. On each of the properties there are large deposits of ore. I gathered from your conversation you wished properties with very little copper and I think these will answer as to that.

I may say also that a new route for a railroad has been surveyed and this brings railway communication three miles closer to these properties than the former proposed route.

Kindly let me hear from you by return if possible as I should like to know your position in regard to them without delay.

Yours truly,

Michael McGinnis.

*The samples assayed all right
but I cannot go into the matter
until summer comes,*

Edison

GENERAL REPORT OF PROSPECTING WORK OF FALL AND WINTER OF 1901.

The prospecting for magnetic ore of nickel, namely, pyrrhotite by the use of the so-called dip needle, was carried on from the middle of August, 1901 to the close of January, 1902 under the direction of Mr. Edison and the immediate supervision of Messrs. Chapman and Miller. During this time a considerable area was covered in the nickel regions in the following Districts: Sudbury, Ontario; Litchfield County, Conn. and Lancaster County, Penna.

In the first mentioned, about 8,000 acres of Government and private lands covered and indications of nickel deposits found in ten localities, varying widely in extent and quality. From present indications it would seem that the most of these deposits are valuable and well worth further and more thorough investigation.

In Litchfield County, Conn. in the immediate vicinity of Prospect Mountain, where there are several long since abandoned Mines, indications of nickel deposits were found which were very satisfactory indeed, not only in regard to the magnetic survey but also to the samples collected and analysed.

In Lancaster County, Penna. the results of the work were quite the opposite, as only two very small and ~~poor~~ deposits outside of the Gap Nickel Mine of Mr. Joseph Wharton were found. The character of the country is such that geological and prospecting work is most difficult and unsatisfactory and further work in this region is hardly warranted.

For convenience, the report is divided into three sections, each relating to one of the above mentioned districts and following is a detailed description of the Country, work and results:

SUDBURY DISTRICT, ONTARIO-

This region is located in the central part of Ontario,

some 50 miles North of the Georgian Bay and is accessible at the present time only by the Canadian Pacific Railroad. It is one of the two great nickel producing districts of the World and considerable capital has been and is now being invested in ~~ENH~~ its mining industries. By far the larger part of it is still in possession of the Crown and land can be leased or bought at a very low price and although, doubtless, the most of the surface showings are already claimed, still it is reasonable to think that many deposits are so covered that only by a magnetic survey can they be revealed. It was with this idea in view that the work was carried on.

The general geological formation of the country consists of a central body of Cambrian rock about 8 x 40 miles in extent and having a direction about 15 deg. North of East. By report this is barren of nickel, but carries some iron. Completely surrounding this body are Laurentian and Huronian and Greenstone formations. The latter, consisting mostly of Diorite and lying in long and narrow belts parallel to the boundary of the central body, is the nickel bearing rock, the deposits being richest along the contact with the Huronian and Laurentian rock, i.e. quartzite and Granite. For the most part, the country is very much broken by high and abrupt hills where the rock formation can be easily seen. However, over a considerable area directly South of Lake Wahnapitae, the rock is deeply covered by gravel and the formations are doubtful.

Operations were begun August 19th and continued until November 18th. The party beside the two in charge consisted of five needle men from the States and a guide, cook and helper from Sudbury. In order to facilitate the work a complete camping outfit was obtained and the party camped in places as convenient to the localities being surveyed as possible. The work consisted of the observing and noting of the deflection of the dip needle every

thirty feet, as the men, generally 150 feet apart, passed over the likely ground determined previously by Government geological maps and by the rock formations. These readings were plotted and wherever there was a showing of an attraction or deflection of 4 deg. or more, a detailed survey of this immediate vicinity was made with much closer lines and readings. If the indications were sufficiently satisfactory, the position of the deposit relative to the Government survey was determined and application for the surrounding land filed with the Government authorities and samples of the rock obtained where possible and shipped to the Laboratory at Orange for analysis.

The Crown land, if in Government surveyed territory and within six miles of a railroad, can be bought outright ^{for \$3.50 per acre.} or leased at the rate of \$1. per acre for the first year and 30 cents per acre for the succeeding years. If in surveyed land but between 6 and 12 miles from a railroad, the rates are \$3. and \$1.25 ^{and} respectively. Elsewhere in surveyed territory \$2.50, \$1. and 20 cents respectively. The surveyed territory is blocked off in Townships of six miles square with East and West and North and South boundaries and these in turn are divided into six concessions, numbered from South to North and each concession into, generally twelve, lots, numbered from East to West.

It was thought better to lease the land until a thorough prospect by means of a diamond drill or sinking of shafts could be made and consequently applications for leases were filed for the plots of land desired. In the above mentioned manner, about twelve square miles of Government and private land were covered during the season. The accompanying table shows the ground covered by Townships.

Lorne	3/8 sq. mi.	Fairbank	1/2 sq. mi.
Graham	1-1/2 " "	Snider	2-3/8 " "
Waters	1/4 " "	Garson	2-1/4 " "

Creighton 1-1/8 sq. mi. Faldenbridge 3. sq. mi.

As stated above, ten localities of attraction or deposits were found. The description of each together with the unfruitful work follows and copies of the magnetic survey maps accompany the report.

In order to make a thorough test of the instruments and method of work and to give the men practice before attempting to survey the most likely regions, the camp was first located in the Township of Lorne and several days of preliminary work carried on under the personal supervision of Mr. Edison. When details were satisfactorily arranged, the party moved on August 29th to the Vermillion River, some four miles north of Whitefish, which is on the Soc branch of the C.P.R. Here parts of lots 11 and 12, Con. 5 and 9, 10, 11, Con. 6 of Graham, were surveyed following the line of contact between the Granite and Diorite. No satisfactory attractions were found in this area and on September 5th, the camp was moved to one mile north along the River.

The first "find" consisted of numerous patches of high attraction of varied extent distributed closely over a considerable area having a centre upon the Vermillion River, some five miles north of the town of Whitefish. This area extends over parts of the following lots:

Lots 11 and 12, Con. 6 of Graham.

" 10, 11 and 12, Con. 1 of Creighton.

" 1 and 2, Con. 1 of Fairbank

The prevailing rock is Diorite and the distinct line of contact between this and granite lies along the northern boundary of the area surveyed.

The Vermillion River, which is about 50 feet wide and quite deep, runs through the centre of the locality. The region cannot be reached at the present time by wagon roads, the nearest

being about one mile distant. The country is quite rough ^{with} ~~but~~ high and with abrupt outcrops of rock and is thickly covered with timber.

The following applications have been filed for the land in this locality:

Graham- Lot 11, Con. 6- North half of North West Quarter

" " 12, " 6- " three quarters

Creighton " 10, " 1 Eastern half

" " 11, " 1 Southern half

" " 12, " 1 Southern three quarters

Fairbank " 1, " 1 Southern quarter

" " 2, " 1 " three quarters.

Of these the applications for Lots 11 and 12 of Graham and 11 and 12 of Creighton (665.9 acres) are allowed, but leases not yet issued and the remaining 460 acres allowed and leases issued.

Having completed the work in this vicinity, the camp was moved September 16th to the township of Snider and the claims of Henry Ranger of Sudbury were examined. They covered parts of lots 3 and 4, Con. 4 and lots 7 and 8 Con. 3 of Snider, but no attraction of consequence was found and a further description here is unnecessary.

The next "find was smaller to the first in character, consisting of numerous small patches of fairly high attraction, covering lots 3 and 4, Con. 5 of Snider. Its centre is about half a mile from the Manitoulan and North Shore Railroad on the south; 1-1/2 miles from the C.P.R. on the north and within a radius of 5 miles are the Murrey, Coppercliff, Elsie and North Star Mines. It is accessible by lumber roads and the country has been quite extensively cleared of timber. It is also rough with outcrops of rock. The rock is mostly all Diorite, the contacts with granite lying along the north west corner of the plot and not more than

*A. Ranger Claims.
Snider - Con. IV - Lots 3 & 4.
" VII - " 7 & 8.*

Snider - Con. IV - Lots 3 & 4.

one quarter of a mile distant from the Southern boundary.

Applications for these two lots were filed and a lease has been issued for lot 4 and negotiations are pending for the other.

The total area is 599-3/4 acres.

On September 25th, we moved in the township of Waters and surveyed along the northern boundary of a belt of Diorite^{upon} which is located ~~the~~ Copper Cliff Mine. Within a distance of three miles west of this Mine in lot 5, Con. 1 of Snider, two localities of attraction were found. They were some 600 feet apart in a west and east direction, of small extent but quite distinct and the attraction was very strong. That to the west covered an area of 2,000 square feet and that to the east 2,500 square feet. A small pond is quite close and about two miles to the south is the Soo branch of the C.P.R. and a good wagon road is also quite close. The country is quite hilly.

The application for the middle half of this lot was made but a lease has not yet been granted owing to the complication arising over a former application by another party, which has made no payments, however. Negotiations are being carried on in reference to the matter.

From this camp another "find" was made in lot 7, Con. 5 of Waters, on the farm of R.W. Trist of Victor^{the} Mine. It covers an area of over one quarter of an acre and the attraction is quite high. It is located within the belt of Diorite above mentioned and about one mile north of the Soo branch of the C.P.R. The locality is free from large timber and accessible by wagon roads. Negotiations have been carried on with the owner but no satisfactory understanding has as yet been reached.

On October 3rd, the camp was moved to lot 5, Con. 1 of Creighton and from here a survey was made of the northern portions of lots 4 ~~and~~ 8 including Con. 6 of Graham. This included the

Snider - Con. 1 Lot 5.

Graham -
Con. 6 - Lots 4 & 8
R.W. Trist - farm.
Waters - Con. 5 Lot 7.

claims of H. Ranger in lots 7 and 8 and one claim of Defore in the northern quarter of the latter lot.

The belt of Diorite here covered is the continuation of the one upon which is located the Gertrude Mine of the Lake Superior Power Company and the same which was surveyed from the camp on the Vermillion River. In lot 6, close to the northern boundary, two localities of attraction were found, 1500 feet apart approximately. They are located about one mile from the Gertrude Mine in a direction a few degrees south of west and in a region quite rocky and woody and at the present time not accessible by roads. The Manitoulan and North Shore Railroad when completed, will be within a mile of the "finds."

The attraction to the East has an extent of 220 feet in an east and west direction and an average width of 50 feet north and south. It is located on a small ridge of Diorite where there is scarcely any iron stain on the surface. That to the West has an east and west length of about 350 feet and an average width of about 30 feet with two small parallel deposits to the north of the west end. Surface indications here are also wanting. An application was filed for the North quarter of this lot but a lease has not been granted, as the township has not yet been cleared of timber and the Government is holding it for ^{the} ~~this~~ purpose.

In the north East 1/8th of lot 8 a small area of attraction of about 1800 square feet of moderate strength was found. An application for this plot was filed with the Government. As, however, it has been already leased to Defore, further investigation has been for the present discontinued.

This completed the prospecting of Government land to the West of Sudbury and on October 18th, we moved into the district south of Lake Wahnapitae, where there is a deep capping of gravel over the rock formations. The presence of a few isolated patches of Diorite and mines, more or less developed, were considered suffi-

*Detail.
Graham - Con. VI lot 6.*

*Detail.
Graham - Con. VI
lot 6.
Falconbridge &
Curson.*

oient indications to warrant the work in the district. The ground covered in this vicinity, is as follows:

Portions of Lots 10, 11 & 12 Con. 3 of Falconbridge

" " " 9 & 10,	" 4, "	"
All of Lots 11 & 12	" 4, "	"
Portion of Lots 11 & 12	" 5, "	"
Portion of Lots 1, & 2	" 3 "	Garson
All of Lots 1 & 2	" 4 "	"
" " " 1	" 5 "	"
Portion of Lot 2,	" 5 "	"

Within this area two localities of low attraction were found. One is located in Lot 12, Con. 4 of Falconbridge and covers about 1-1/4 acres and the indications are quite encouraging. The other is in Lot 1, Con. 3 of Garson. The extent of this is somewhat uncertain owing to the weakness of the attraction, but readings of 5 degrees were obtained over an area of at least 5 acres. Leases have been issued for these localities as follows:

S. 1/4 Lot 12, Con. 4 Falconbridge

N. 1/2 of S. 1/2 Lot 1, Con. 3, Garson.

Both of these localities are situated within the gravel district and as there were no exposures of rock in the immediate vicinity, no samples could be obtained and only by drilling can the value of the deposits be determined. They are about 3/4 mile apart in a N E direction; are easily accessible by wagon roads and the locality in Garson is about two miles from the railroad of the Emory Lumber Co. which connects with C.P.R. They are situated between the Nickel Copper Company's claim in Lot 8, Con. 4 of Falconbridge on the East and the Cryderman Mine of Ludwig Mond in Lot 4, Con. 3 of Garson on the West.

While this work was being carried on by some of the party, others made a thorough examination of the property of J.C. Ryan in Lots 8, Con. 3 and 4 of Graham, which was offered for sale to

Detail
 Falconbridge - Con. IV - Lot 12.
 Garson - " III - " I.
 J. Ryan Property -
 Graham. Con. VIII
 Lot 8.

Mr. Edison. A close magnetic survey was made and numerous samples taken. The survey revealed a large and strong area of attraction but the analysis of the samples resulted so poorly that Mr. Edison did not further consider the proposition.

This completed the work in the Sudbury District and on Nov. 19, the party started for Orange. The following tables show the location, extent, maximum attraction and present status in regard to possession of the surrounding land, of the several deposits discovered:

Township	Con.	Lot	Portion Applied For	Area Applied for Acres	Approx. Area of Attraction	Maximum Deflection	Status
Graham	6	11	N 1/2 of N.W.	1/4	34-1/8	12	Lease to be issued.
Graham	6	12	N 3/4		234-3/4	18	Do.
Creighton	1	10-	E 1/2	140		17	Lease issued Dec. 19, '01.
Creighton	1	11-	S W 1/4	90		17	Lease to be issued.
Creighton	1	12	S 3/4	240		20	do.
Fairbank	1	1	S 1/4	80		15	Lease issued
"	1	2	S 3/4	240		12	Dec. 18, '01.
Snider	1	5	S 1/2 of N 1/2 and N 1/2 of S 1/2	160	2000 sq. ft.	63	Being negotiated for.
Snider	1	5	"	160	2500 " "	90	do.
Snider	5	3	Entire	318		20	do.
"	5	4	S 7/8	281-3/4		28	Lease issued Dec. 18, '01.
Waters	5	7		1/4 acre	1/4	25	Owned by R.W. Trist as farm land.
Graham	6	6	N 1/4	79-3/4	1/4"	12	Lease not granted
"	6	6	"	79-3/4	1/4"	27	do.
"	6	8	N E 1/8	40	1800 sq. ft.	10	Previously leased to DeFord
Falconbridge	4	12	S 1/4	78	1-1/4 acres	14	Lease issued Dec. 31, '01.
Garsen	3	1	N 1/2 of S. 1/2	80	?	7	Do.
Acreage upon which leases will soon be issued							598-7/8
Acreage upon which leases have been issued							899-3/4

Acreage which cannot be leased.

119-3/4

Acreage under negotiation

478

Litchfield Co., Conn.

The work done here consisted of the examination of only old nickel Mines in the vicinity of Litchfield, Conn. principally about Prospect Mountain and occupied two men for a period of one week. A magnetic survey was made about each mine and samples taken from the dumps, as the shafts were inaccessible on account of water. The magnetic survey maps and results of analysis of samples accompany the report.

Prospect Mountain Group of Nickel Mines.

Prospect Mountain, the centre around which the mines are located, is situated about four miles west of Litchfield and two miles north west of Bantam, where there is the nearest railway, the Litchfield branch of the N.Y. N.H. & H.R.R.

The country is quite hilly and rough. Outcrops are quite numerous and water is quite plentiful. The mountain seems to be in an extensive body of Diorite or porphyry rock of about 9 sq. mi. and the only evidence of different rock within a considerable distance is the Schistose formation near the Grannis Mine hereafter mentioned. Most of the outcrops consist of this porphyry, which is somewhat similar to the diorite found in Canada, while the rock from the workings is quite similar.

Seven Mines were examined, namely, Smith, Pool, Buok, Wheeler, Dr. West, Johnson and Grannis. These are located around the mountain, near its base, in the order named, starting on the N.E. side. Each was examined by making a magnetic survey about the workings and taking samples, which were mostly from the dumps, as the shafts were filled with water. A report on each mine follows:

SMITH MINE

This is on the N.E. side of the mountain in a claim of

40 acres. The surface rights are owned by T.L. Wheeler, Litchfield, Co.; the mining rights by the Connecticut Mining Co. of Litchfield, Conn. Two shafts have been sunk on the side of a small ledge or terrace. They are about 40 ft. deep and 120 feet apart, in a line running N. 10 deg. W. There is no showing of any amount, there being only slight stain on rock near the shaft to the N. The rock in the vicinity seems to be all diorite and no contact with primary rock could be found. The base line for the magnetic survey was run N 5 deg. W, nearly in line with the shafts. Cross lines were run every 50' and readings taken every 10'. The attraction was quite slight; the maximum readings being 9 and negative 9 ^{corrects} and an approximate area of 10,000 sq. feet.

POOL MINE.

This is on the S E side of the mountains and here the most development work in the district has been done. The surface and mining rights are held by the Estate of T.M. Mitchell, Elliott Square, Buffalo, N.Y.

The workings consist of three shafts, with a maximum depth of about 90 feet, within a distance of 50 feet in a N W direction. Two of these are connected by a small tunnel. Very little surface or gossan showing is apparent here. Near the tunnel there is some stained rock, about 2 ft. thick above the water in the shaft. Also about 100 feet N of the shafts there is a patch about 15 feet square of slightly stained rock. The shafts have been sunk in diorite, but 75' to the East of the shafts there is a small patch of granite. The base line for the survey was run N 20 deg. E, passing along the edge of the shaft to the East. The cross lines were 50' apart and 10' readings were taken. The attraction showing was poor. Although the maximum reading was -16 and 7, the field was quite small, 6,000 sq. ft.

BUCK MINE

This is located on the S W side of the mountain, some 300 yards from the foot. Both the surface and mineral rights are held by the Estate of T.M. Mitchell. One shaft about 50' deep and a pit have been sunk here, about 30 feet apart in an E & W line.

The shaft was sunk in a showing of gossan, 50' N & S and 20' E & W, in a fairly level tract. The gossan was the only surface showing. Diorite was the only rock found in the vicinity.

The base line for the survey was run in a S E and N W direction, the cross lines being 50 ft. apart. 10' readings were taken. The survey shows quite a good belt of attraction with a maximum reading of 20 and 12 extending S E about 250' and 50' in width.

WHEELER MINE

This is located about 1000' S W from the Buck Mine and consists of one shaft sunk in diorite. As there was no surface showing nor magnetic attraction about the shaft, no further examination was made.

DR. WEST MINE

This is located on the West side of the mountain on the side of the road leading to Bantam. It consists of one shaft sunk in a small showing of stained rock, about 10 feet thick as shown by excavation. The owners of the surface and mining rights could not be learned. A magnetic survey was made, the base line running N 10 deg. E, cross lines were run every 25' and 10' readings were taken. A tract, 100' x 50', of magnetic attraction was revealed, the maximum reading being 15.

JOHNSON MINE

This is located on the West side of the mountain some 200 yds. west of the line between Dr. West and Grannis Mines. The surface rights are owned by F.M. Grannis, Bantam, Conn. while the mineral rights are held by John T. Hubbard, Litchfield, Conn. It is

located on a tract of 23 acres, and S W from the Grannis Mine about 1000 feet. The work done here consisted of ^{the}sinking ^{of} one shaft about 20 feet deep in a small showing of stained rock, as revealed near the top of the shaft.

The base line for the magnetic survey was run in a N E direction and cross lines were run every 25 or 50' near the shaft, and 10' readings taken. Three veins of varying extent were revealed, the shaft being in the middle one. The one to the N was quite extensive and strongly magnetic as shown by the survey map. The attraction extended in patches of varying size over an area of 8 acres. The largest of these patches covered 30,000 sq. ft. and had a maximum deflection of 34. An attempt was made to connect these localities with the Grannis Mine, but the attraction was lost about half way between the two mines.

GRANNIS MINE

This is located on the N W corner of the mountain and consists of an 11 acre tract, the surface and mining rights being held by F. M. Grannis and J. T. Hubbard respectively. It is on the side of a small foot hill of the mountain and a wagon road crosses it.

The work done here consists of an excoavation of some 20' square in which have been sunk a shaft 30' deep and a pit. About 400' to the north a tunnel has been driven into the side of the hill for 75 feet. In the tract are several small surface showings with a maximum area of about 20' square. The excoavation reveals a small showing of gossan 10' thick and 25' wide E & W. The work seems to have been all done in diorite and the only showing of a different rock, a schist, is some 500 feet to the west.

Two magnetic surveys were made, one covering the whole workings, the other covering a small area of high attraction over the inner end of the tunnel. The base line for the first was run N by 20 deg. W. 50' and 100' cross lines were run and 10' readings

taken. This revealed very slight attraction near the shafts but considerably more over the tunnel. The smaller survey covered two showings of stained rock and the ground above the tunnel, which is somewhat roughly laid out on the map. The base line was run N E and the cross lines were 10 ft. apart. 5' readings were taken. This revealed quite a belt of good attraction and shows that the tunnel did not reach the richest part of the deposit, which extends over an area of 4000 sq. ft. and has a maximum deflection of 50.

Samples were taken of the surface showings, which carries small specks of mineral. Also the inner end of the tunnel was sampled, which showed mineralization in all the rock. This mine appears to be the most likely of all those examined, with the possible exception of the Buok and Johnson Mines. The attraction is high and extensive and where the attraction is low there is a fair amount of mineral present in the rock, as shown in the tunnel.

As mentioned above, the work in the vicinity of Prospect Mountain was the principal prospecting done. However, two short trips were made from Litchfield to the Torrington Mine on the North and to the Barnum Mine on the South, both distant about 5 miles. The work at the latter was done by P.T. Barnum and associates some years ago and considerable capital was expended. The mine is located in the township of Morris and at present the surface and mining rights are held by Daniel Titus. Three shafts, one said to be 100' deep, were sunk here but no returns resulted and the mine has long since been abandoned. Surface indications are very slight and no attraction of consequence could be discovered.

The Torrington Mine is located about 1/2 mile from the town of West Torrington. The surface and mineral rights are owned by W.H. Barber, West Torrington. Considerable work was done here some 30 years ago and a smelter was operated in connection. A shaft 80 feet deep, was sunk in a showing of gossan some 90 by 35' in extent, situated in a small patch of quite massive hornblende

Torrington Mine

rock with micaceous shist on either side. The gossan consists of quite deeply stained rock and the excavation shows it has a thickness of 6' down to the water. The base line for the magnetic survey ran N E, along the N side of the shaft. Cross lines were 25 and 50 ft. apart and 5' readings were taken. The area of attraction was very small and divided into two parts of 3000 and 1500 sq. ft. with maximum deflection of positive 12 and negative 18.

The results of analysis of samples taken from this district are as follows:

No.	Locality	-Metallic-		
		Copper	Nickel	Cobalt
#5	Smith Mine (Dump)	1.71%	1.07%	0.1%
#6	Smith Mine (Across surface showing)	.051	.036	
#7	Pool Mine Dump	1.070	1.500	0.20
#8	Johnson Mine From dump and surface showing	.055	.087	
#9	Pool Mine-Across surface showing	.047	.036	
#10	Dr. West Mine Surface showing	.039	.050	
#11	Grannis Mine " "	.063	.050	
#12	" " Surface rock in vicinity of mine	.16	.182	
#13	Buck Mine Dump	.59	.240	0.100
#14	" " Surface showing	.77	.50	.30
#15	Grannis Mine Surface showing		.072	
#16	" " From tunnel across face		.53	.10
#17	" " do. Blasted rock			^{Ni. Co. Cu.} .355
#18	Johnson Mine Surface rock			.029
#19	From rock along road between Prospect Mt. and town of Warren			.029
#20	From rock about Mt. Town			.007
#21	General sample from Prospect Mt.			.021

	Ni.	Co.
#22 From rock along road between Litchfield & Torrington Mine	.014	
#23- Torrington Mine- From rock about Mine	.029	
#24 " " Dump	.63	.20
#25- " " Surface showing	.200	
#26- P.T. Barnum " Dump and surface showings	.050	

These analyses show that nickel is distributed through all the rock in the district and it is quite evident that the locality is well worth further investigation.

LANCASTER COUNTY, PENNA.

In this country within 14 miles of Lancaster is the somewhat famous mine of Joseph Wharton known as the Gap Nickel Mine. Some few years ago this mine was practically the only source of nickel supply in the United States, but it has been recently abandoned on account of the far better deposits in Canada. It is located in a small body of massive hornblende, bordered on either side by gneiss. About this mine the prospecting work was carried on and the country within a radius of 3 miles carefully examined. Owing to the great scarcity of outcrops, the land being extensively farmed, the region is poorly adapted to prospecting work and only two localities of attraction were found. These were some 500 ft. apart and located about 1 mile west of the Gap Mine in the same valley. They were situated in a field known as the Gonder Field, and covered areas of 10,000 and 9,000 sq. ft. having maximum deflections of 5 and 10 respectively. Shafts about 90' deep were sunk a few years ago close to both of these areas but no ore of any value was found. The property is now owned by Joe Van Dyke, Nickel Mines, Penn. The showing being so poor, no negotiations have been entered into in regard to purchasing the property.

LAW OFFICE
OF
JOHN T. HUBBARD.

Litchfield, Conn., February 10th, 1902.

Mr. J. V. Miller,

Orange, N.J.

Dear Sir:

If Mr. Edison could see me some day of next week instead of Thursady of the present week I should be pleased to go to Orange and do myself the honor of calling at the Laboratory. To morrow, Tuesday I have to begin the trial of a some what important case at Winsted and it may possible last till Thursday and on Friday I have to see to the interests of a client who is charged with stealing chickens. it will be his last chance to come before the court until April & as he has been 3 months in jail awaiting trial I cannot well ask him to wait longer.

I have another trial on Saturday but will go to Orange on any day of next week which will be most convenient for Mr. Edison.

I hold the record title to the ming right in 4 pieces of land in addition to the Ganniss & Johnson properties & if I do not go to Orange this week I may have a

LAW OFFICE

OF

JOHN T. HUBBARD.

Litchfield, Conn.,

chance to look up a little about the situation of these rights and see what the position of the owners of the surface is.

If however you write me that Mr. Edison cannot give any time to this matter next week I will try to go to Orange Thursday provided the Winsted case is finished before then— perhaps I will know of this Tuesday and perhaps not until Wednesday night.

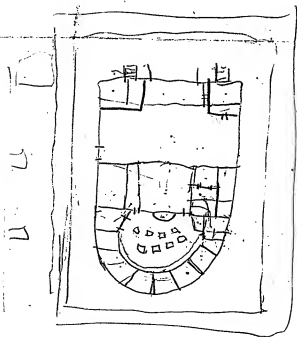
I have found the mine north of town which we searched for in vain. We were close to it once in the land which had ben cut over. The ground was covered with snow when I was there but I got a specimen of the rock— it loks like iron ore and a compass is very readily affected by it. Think I can show it to you if you come up here again.

I shall not go to Orange on Thursday the 13th unless I have word from you that that is the only day on which Mr. Edison can see me and not then unless I telegraph to you. But will go down on any day next week that is named by you.

Truly yours

John T. Hubbard.

[ON BACK OF PRECEDING PAGE]



Ida Group Mines.
Payson Deep Mines.
Europea Mines.

J. C. RYAN,
MINES.

BEDFORD MCNEILL CODE.

Gold Nickel

Hastings, B. C., Feb. 12, 1902.

Miller

Thos. A. Edison, Esq.

Dear Sir,

Write to say that there is
I do not think that there is
any Nickel worth
working on the
property.
Regarding my property of
Lot 8, Concession 3. I will make more
offer, which I especially
keep the price private. I would not give
thousand dollars each. I would not give
If you consider that price satisfactory,
return me on receipt of this an answer by
return mail.

Very Respectfully,

J. C. Ryan.

WM. WHITE, JR.
CONSULTING ENGINEER
PITTSBURGH, PA.

*Answered
March 3-1902*

Pittsburgh, Pa. February 19, 1902.

Thos. A. Edison, Esq.,

Orange, N. J.

Dear Sir:-

Referring to yours of the 31st ultimo, in which you state you are interested in nickel mines, I beg to enclose, herewith, all of the information I have been able to gather regarding the deposit near Tucson, Arizona. I send you all the information; for the reason that I wish you to have some idea of the good faith of the people, who are presenting the matter. They have sent me a bag of samples, which I have forwarded to you by express without opening; for the reason that I presume you will have them gone over and the value determined. This property was brought to my attention by a friend of mine, who is not at all interested in the matter, and as far as I am concerned, myself, I hope it will prove of sufficient interest to you to have the matter investigated, and if it should be found worthy of consideration, and perhaps purchase in the future that I would be taken care of by some arrangement by both parties in interest.

With best regards, I beg to remain,

Yours very truly,

Wm. White, Jr.

Enclosure.

[ATTACHMENT]

Encl. Address "Edison, N.Y. 1880"

From the Laboratory
of
Thomas A. Edison.

Orange, N.Y. Mar 3, 1902

Subject

White

Say that in view of the fact that
there is almost unlimited quantities
of pyrrhotite in narrow veins in the Sudbury
district which can be had at a nominal
price. I do not think the mine would have
any attraction for any one.

Edison

v v # 2 Ch

LAW OFFICE
OF
JOHN T. HUBBARD.

Litchfield, Conn., February 20th, 1902.

Mr. J. V. Miller,
Orange, N.J.

Dear Sir;

After leaving you at the Laboratory I had the cab driver take me to the depot & luckily arrived just as a train was starting for New York. I went to the Cardelac but not finding Prof. Henry there went to the Cr. Union and spent the night there. Found the drifts here about the same as in New Jersey. I enclose a small piece of what I call graphite. You will see it will mark paper or wood like graphite and rubber will erase the mark. The place where it is found is on land which we have owned for years. In 1873 a man leased it for 3 years for mining purposes but did nothing. -- Now you can tell Mr. Edison that I have concluded that \$3 a day for the investigation which he wishes to make will satisfy me. I see that I can do a good deal of it at odd hours and that it will take a good deal of time. All I guarantee is to do my work with reasonable care & skill. I started on the Dr. West

LAW OFFICE

OF

JOHN T. HUBBARD.

Litchfield, Conn.,

Mine yesterday but while I cannot tell until further investigation just what land was included in the deed to Dr. West yet it seems to be a snag to comence with.

Starting on the theory that Dr. West probably owned the mine which was name d after him I think it must have been included in the only deed of mining rights which seems to have been given to him. It is dated in 1832 , there were 4 grantors and they conveyed an one half right in the minerals in all ther lands in the town giving no further description. Now upon looking up our cases I find 3 cases in which this form of blank et . deads came before the court of Errors. While this form of deed is criticized yet they did not declare that this loose description vitiated the deed but decided the cases on other points. I am inclined to consider this deed no good but it is not entirely certain. However I cannot certainly tell until I have searched further whether the Dr. West Mine was included in this deed. I will probably be able to tell you something more definite about it a week from to morrow when I will, unless my time is occupied with other matters , report \$

LAW OFFICE

OF

JOHN T. HUBBARD.

Litchfield, Conn.,

to you & send a statement of my expenses etc.

In cases where we are fairly certain who is the owner of the mining right and of the land it will be best to try to ascertain the possible purchasing price before searching the titles since, if a purchase cannot be made for a sum which seems reasonable to Mr. Edison, there will be little use in searching the title.

I understand Mr. Edison wishes to have me find out what the land in fee can be bought for as well as what the right to mine etc. can be purchased for where the two titles are distinct. However, in case the owner of the surface admits the title of the person claiming the right to dig for minerals it is not necessary to purchase the land. As the Dr. West mine has been partially filled up for years the doctrine of title by 15 years adverse possession may affect the matter.

Since writing the above Eugene Wheeler has come in, he wishes to sell the Wm. M. Wheeler farm of about 300 acres, on which there are mining rights, two dwelling houses and barns and part of an old dam and water privilege for \$2500 but I presume you would not be interested in the farm.

Truly yours John T. Hubbard

[ON BACK OF PRECEDING PAGE]

Proposition regarding three dollars per
day accepted, go ahead & see
what you can get these several mines
for, & the land necessary ~~to~~ around
the mine for working purposes &
ought a Road into mine— Then if
prices are reasonable we can search
title & decide if a purchase is to
be made—

J. W. G.

~~Mr. J. V. Miller~~
Mr. J. V. Miller

February 27th 1917

Mr. Edison

Mr. John V. Miller has given
me some orders for similar articles.

As you wanted the acc

charged to Thomas a Edison and

not the E. I. Co.

Shall we make a new number
for above acc.

#1246

OK W.E.

Full Address "Edison, New York"

*From the Laboratory
of
Thomas A. Edison.*

Subject, _____

Orange, N.J. Mar. 6, 1902.

Thomas A. Edison, Esq.,

Ft. Myers, Fla.

Dear Mr. Edison:

Hubbard Bill - Edison

The enclosed three letters from Mr. Ryan in regard to transference of leases and Mr. Johnson's claim were received this morning. As both involve a question which I can not decide I send them on to you. Will you kindly advise me what to do in regard to both. It seems to me best to hand the lease matter over to Walter Mallory or some one that will be here right along.

From the letter in regard to the Johnson property, I judge that the claim on the east half of the lot is entirely given up and therefore we shall have to pay the \$125 on the West half to Mr. Johnson and the regular rental on the part we desire to the government, making a total of \$285. Will you kindly return the papers.

Yesterday we received a note from Mr. Hubbard enclosing the statement of his expenses for the trip down here; Johnnie Randolph says he can not pay this without an order from you. Will you kindly arrange the matter.

Hope the launch is satisfactory and you are having a most excellent time, I remain,

Yours sincerely,

John Miller.

Edison Station "Edison, New York"

*From the Laboratory
of
Thomas A. Edison.*

Subject: —————

Orange, N.J. Mar. 12, 1902.

*I want to accept Hubbards property
right off in regard to Johnson lot, so have
him draw up papers & also abstract of title*

Dear Mr. Edison:

Please find enclosed a letter and two copies of an agreement from Mr. Gordon of Sudbury. ~~I pay the money right away~~ Your signature is necessary on the agreements. Kindly return all and I shall forward one copy of the agreement to Mr. Gordon, providing everything is satisfactory to you.

I have also received a proposition from Mr. Hubbard concerning the Johnson mine. He offers the 18 acres and right of way to highway, which we ask for, including the surface and mining rights for \$150. I should think it would be better to wait before making any definite agreement until after I go up there, so as to be sure we get the ground we desire. I shall write him accordingly unless you think otherwise.

Yours sincerely,

John Miller

To. Thomas A. Edison, Esq.,
Ft. Myers, Fla.

Call address "Edison, New York"

*From the Laboratory
of
Thomas A. Edison.*

Subject, _____

Mr. Thomas A. Edison,
Ft. Myers, Fla.

Dear Sir:

On Monday and Tuesday last I was in New Haven looking for men for the Canadian trip and a geologist for Conn. About 30 men applied for a position on the former trip and most of them seemed to be fine fellows, some having been on surveying parties before.

They were all poor men who had worked their way through college and are deserving of help. They were very anxious to know as soon as possible whether or not they would be taken and I told them I would give them an answer in two weeks. Will you kindly let me know if you wish me to make definite agreement with them now.

In regard to the geologist for Conn., I saw Prof. Gregory, who with two other men are carrying on the geological survey in Conn. and Mass. for the government. He informed me that they had spent four years on the work, which was practically ready for publication; that they had manuscript geological maps (colored) which gave the boundaries of the different formations, as nearly accurate as it was practical.

He said he could have these copied for our work and thought with these it would be quite unnecessary to have a geologist with us.

*Orange, N.J. Mar. 19, 1902
file under Synthesis*

Call to Address "Edison, New York."

From the Laboratory
of
Thomas A. Edison.

Subject, _____

Orange, N.J. #2.

I arranged with him to have the copies made for us immediately and as he will supervise the work, it will probably be all right. Under these circumstances I did not engage a geologist. Prof. Gregory can furnish us a man who has been with him on the field and who could be with us three days each week, if you think we better have one. I think it would be well to try working from the maps alone and if not satisfactory we can engage a geologist.

Hoping to hear from you in reply very soon, I remain,

Yours sincerely,

J. N. Miller.

CLARKE & CO.
 Mines, Stocks,
 and Investment Securities.

MEMBERS STANDARD STOCK EXCHANGE
 10 ADELAIDE STREET
 THE TORONTO BOARD OF TRADE.

TELEPHONE MAIN 2044

OFFICES: 75 YONGE STREET
 JAMES BUILDING

TORONTO, April 8th, 1902

Thomas A. Edison, Esq.,
 Orange.

Dear Sir:-

John Miller
Write & say our men
start prospecting in July

We have under Lease the S 1/2 of lot 12 in Con. 5
 Denison, containing 280 acres. *but will not search Denison*
 As you will see from the *copy sent to that of Cavendish*
 fragment of Map enclosed, it is in the Greenstone. A wagon
 road from Victoria Mine runs along the South end of the lot.
will go over the property
a little
 A lumber camp put up last fall including office building,
 blacksmith shop, sleeping and cooking camps, on this road near
 our West boundary, could be used when prospecting and bought
 very cheap. We have found "float" but no outcrop of ore in
 situ. The formation however is right, same as Dr. Mond's
 mines. He has a good show within 250 feet of our S.E. corner
 and a smaller one 300 feet South of our South line. It is a
 good place for your instruments. We will give you a legal
 option at \$3000 to 1st July, next. We have also at same figure
 162 1/2 acres - S.E. 1/4 of 6 and S.W. 1/4 of 6, both in 1st Con:
 Denison referred to in our letter of 18 Dec. last. We want
 to do some more work on the S 1/2 of 6 in 6 Louise before
 offering it.

Hoping to hear from you,

Very truly yours,

Clarke & Co

Ans. 4/10/02
~~*Handwritten signature and scribbles*~~

CLARKE & CO.
Mines, Stocks,
and Investment Securities.

MEMBERS STANDARD STOCK EXCHANGE
IN CANADA SINCE 1891
THE TORONTO BOARD OF TRADE.

TELEPHONE MAIN 2044

OFFICE: 75 YONGE STREET
JAMES BUILDING

Toronto, 9 April 1902

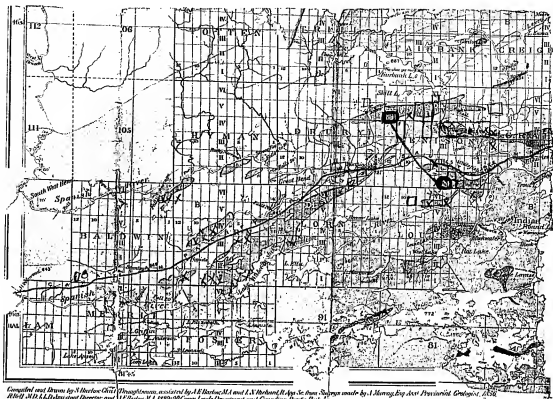
Thomas A. Edison Esq

Orange

Dear Sir The enclosed map shd have
done with to days letter. property
offered is enclosed thus ☒ and line
reason from one to the other. In haste

Yours truly
C. J. C.

[ENCLOSURE]

Line of Section 8 S²E.

Mean local of the ...

5000f' below sea level.

169 Dodd St.
 East Orange N.J.
 Apr. 9. 1902
 Mr. J. F. Epison.
 Answer
 Apr. 9. 1902

Do you think
 well enough of the "North Star"
 Nickel & Copper mine, in Sudbury
 Ontario, to take $\frac{1}{4}$ or $\frac{1}{2}$ interest
 in a new Company to be formed,
 or will you kindly tell me candidly
 whether it is worthy my efforts, to
 represent it in the proper light
 to parties who may be interested?

I will consider this favor, with
 the highest esteem, as I do not
 care to "bark up the wrong tree"

Yours Very truly
 Frank B. Wilson

I have a good
 opinion of the mine
 but have about
 2000 shares
 in Sudbury
 Dist.

Bantam, Conn.

file *nicked* (Cott)
Apr. 12. '02
Ed

Mr. Thomas A. Edison,

Orange, N. J.

Dear Mr. Edison:

The report of the work so far carried on is as follows: —

(Filed 7)
Arrived in Litchfield Monday evening and on Tuesday morning came to Bantam where our headquarters will be for the present. Hard rains during the first part of the week prevented work until Wednesday afternoon. On Thursday we had snow and rain. We have examined the rock along the eastern and western boundaries, every 500 ft., by the Prospect Mt. formation as shown by the colored geological map which was received from The Haven Tuesday morning.

Also Messrs. Hubbard, Scamnis and myself have been over the Johnson property and roughly located the boundaries of the claim relative to the shaft as follows —

600 ft. from shaft due north to N boundary

490 " " " " East " E "

180 " " " " " " S "

The boundaries run practically N & S and E & W.

By laying off the boundaries on the survey map you will find that the locality of highest attraction is well within this claim.

We asked Mr. Hubbard for 18.35 acres. In his offer of \$150 for this area, which includes both the surface & mining rights, also right of way to highway through eastern part of property, he designated that it covers the eastern 18.35 acres. This will include considerable land to the west which is not needed. The eastern 14 1/2 acres I believe, will cover the land, within the Johnson property, which we wish. I shall have Mr. Hubbard draw up deeds for this area for the surface & mining rights.

The area of attraction, as shown by the survey map, evidently extends into the adjoining property to the north, owned by Fred S. Decker. A strip of land 20.0 ft wide along the N boundary of the 14 1/2 acres of the Johnson property as above described will include this. Mr. Hubbard will get a prime on the mining rights of this strip, also on right of way to highway.

through this property, as there is a much better road through this than can be made through the Johnson property.

The status of the other mining claims is as follows:

Grain Mine — The mining rights here belong to Mr. Hubbard. He says he does not care to give up interest in all the mining propositions around Prospect Mt. and wishes therefore to retain this property or at least part of it. He would probably sell a portion of his interest, perhaps as much as $\frac{1}{10}$ the, but as you have been desirous of getting the property entire, I let the matter drop for the present. Unless you wish to take the property under the above conditions it might be well to let the matter stand for a time.

Smith Mine The mining rights are held by the Connecticut Mining Co. which is practically out of existence. Mr. Hubbard has tried several times to reorganize it, have a meeting of stock holders, or in some way revive it, but to no avail. He believes that it might be possible to buy up most of the stock after considerable searching or through the process of law compel the company to reorganize or

forfeit its Charter. The Co. holds a clear title to the mining rights.

The surface rights here belong to Thomas L. Shuler, who paid a price of \$400 for 4 acres about the workings, which is far beyond any reasonable value, or value of surrounding property. Of course the surface rights are of no value unless the mining rights can first be obtained.

Pool Mine - Mining & surface rights are owned by the estate of T. Mason Mitchell. Both are probably clear titles. Mr. Hubbard is carrying on correspondence with Mr. N. J. Darrow of Philadelphia in regard to the matter but as yet has received no definite price; as Darrow is waiting to hear from the members of the Mitchell family. He thinks a definite offer from you would aid matters considerably, either an offer for an out & out sale or for a lease.

Black Mine - The same Mitchell estate holds this mine, both surface & mining rights, and the same conditions as described in regard to the Pool mine, pertain to the Black mine.

De Puel Mine - The owners of the surface right about this mine are Robert J. Landon and his sister Mrs. Henry (Caroline E.) Crossman. The

some of the mining rights is very uncertain. The boundaries of the Mining Claim as described in the old deed are by no means definite and the entire matter is quite confused. Landon & his sister Bridgety claim the mining rights as they offer to sell this on $1\frac{1}{4}$ acres, about the workings, for \$15. They positively refuse to sell the surface rights. Mr. Hubbard believes that if we bought this right from Landon mining work could be carried on without interference.

Townington Mine — The owner refuses to sell the property or to consider any proposition.

As soon as we can examine the northern boundary of this formation and stake off the base line, we shall be ready for the other men, which will be probably Wednesday or Thursday of next week. By that time the recording machines should be finished & the men can bring them.

Yours sincerely
John W. Miller

111

File Nickel

Bantam, Conn. Apr. 22, '02

Mr. Thomas A. Edison,

Orange, N.J.

Dear Mr. Edison: ~

Since the last report of Apr. 12th examination along the boundaries of this district of gabbro formation has been continued. On Wednesday evening, Apr. 16, four of the men, Messrs. Devine, Stokes, Chabers and Mayon arrived and the next noon Messrs. Sadler and Dolan arrived.

Thursday was occupied in explaining the use of the instruments to the new men and giving them a little preliminary work in taking readings about the Buck Mine. Since then, until today, survey lines have been run to the east of Bantam and south east of the bare line, covering country where likelihood of deposits is small, but which is ground within the formation. This work accustomed the men in running the lines.

The base line has been taken along the road running about East and West through Bantam. No stake is located in the town of Bantam and stakes have been placed about $1\frac{1}{2}$ miles to the East and $2\frac{1}{4}$ miles to the West. This line cuts this gabbro formation in half. The most likely ground seems to be about Prospect Mountain and over a belt extending along the centre of the formation directly south from the mountain.

Today we started work to the West of town along the contact, running our line NW, every 50 ft and taking 50 ft. readings. Quite an extensive area of attraction was found at the outset along the base line, about $1\frac{1}{2}$ miles west of town. Most of the readings were about 10 to 15 but some were as high as 30. I am afraid however it is due to magnetite in the host rock. A general sample was taken over some of the area, which will be sent you. I should like to know the result of the analysis as soon as possible. If nickel is present we shall make a detailed survey of the locality, if not, of course it would hardly be necessary.

Mr. Hubbard's latest proposition in regard to the Grassino Mine is as follows - he "will rent it for 5 years for \$4000, not proceeds, to be worked by other minds are." He seems to be quite positive in his decision to keep some interest in it. I suppose you do not wish to agree to such a proposition.

It being necessary for me to come to New York on account of some insurance matters this Saturday, I shall report to you ^{then} more fully the condition of affairs here.

Yours sincerely,
J. V. Miller.

O. W. BENNETT,
DEARST BUSINESS,
CHAS. JOHNSON,
"TRUE" PHILADELPHIA.
"A. B. & CO." THE EDITOR ALSO USED.
"Phone No. 3121."

*Answered
May 1-1902*

PHILADELPHIA, PA., U. S. A. April 24th 1902

*Answer as below
of file Nickel*

Thomas A. Edison, Esq.,
Orange, New Jersey.

Dear Sir:-

I am in receipt of your favor of the 22nd inst.
referring to the nickel properties near Litchfield, Conn.,
and concerning which I wrote you on October 4th, last
year.

I own some of the stock in the Connecticut Mining
Company, which operated their property at Litchfield during
the Civil War.

I am able to co-operate with you in obtaining much
of their remaining stock that would be available, if desirable,
provided we could formulate a plan, which I believe would be
feasible.

Yours very truly,

O. W. Bennett

*My men have been over
the Litchfield Mines of the
~~past~~ There is none that
are attractive as mining
ventures,*

John W. H.
has seen the
part about the instrument
of Hancock

Did you show this
part about Counter
Hancock -
to May 7, '02

Mr. T. A. Edison

Orange, N. J.

Dear Mr. Edison: —

Since my last report of Apr. 22, the magnetic survey has been continued to the NW of the base line, covering most of Prospect Mt. Several areas of attraction have been found varying in extent from 20' square to 300 or more feet in length and 75 ft. or so in width; and in strength from 5° to 22° . No detailed surveys have been made as yet but as soon as they are made I shall send you full information of each together with samples.

As yet I have not seen Prof. Gregory in New Haven, but expect to in a day or so, when I shall try to learn from him the character of this and other formations and the amount of ground we ought to go over. If it is necessary to cover this entire Prospect Mt. formation it will cost —

summer quite a little time and I doubt whether, with the six men, we can do, before July, much more than this, Torrington and Dartington Gum formations. I think we could handle two more men here, which would hasten along the work. If you decide to send more. Eble, at the phonograph works I think would be a good man. Johnnie Randolph known of him.

We have been using the recording machines for the past week and they give good satisfaction. With a few small improvements I think they will be all right. As regard to them I would like to say that the six machines already sent arrived in poor condition, two continuous counters not working at all, and three machines playing out after a short use, owing to the fact that a bearing was not properly fitted. We had the same trouble with the first machine made by Tronika fixed it, but he evidently did not try to prevent the same trouble in the two others. It looks as though he had rushed the work too much. I mention this for fear the new

mining machine will not be properly finished.

Matters with Mr. Hubbard remain about the same. He has as yet given no answer to your proposition in regard to the Grannis Mine.

I send you today by express samples #129 to 153 incl. taken from above above the Grannis Mine tunnel. The sample of the tunnel was taken in about 6 foot sections, a specimen about every foot, along the east side or wall, starting with the beginning of the open cut to the tunnel and ending with the face of the tunnel. The samples taken from surface outcrops above the tunnel will show you the difference in the gabbro rock on the surface and that at a depth.

Trusting every thing is satisfactory to you, I remain

Yours sincerely
J. W. Miller.

Box G.P.O. 1093.
TELEPHONE 2781.



BOOMERANG MOUTH-ORGANS, & IMPORTERS OF MUSIC, MUSICAL INSTRUMENTS, & MUSICAL TOYS.

HEAD OFFICE 37 & 39 KING ST.

Mr. T. A. Edison,

Orange, New Jersey.

Dear Sir,

Confirming mine of 14th April I take the pleasure of again informing you, acting up to my promise, I have succeeded in placing your demand for cheap Nickel Ore Mines in the best hands desired, both as reliable persons, deserving confidence, as well as having a righteous claim and thorough understanding in the matter concerning Nickel, samples of which, I was told, were to leave Sydney by same Steamer as this letter.

These gentlemen, Messrs. Hardy, Morgan, & Tewkesbury, have at their command two very large mines, and are able to contract as many as there will be necessary for you to prove to the world what a great fortune can be made out of an idea coming from your mighty and potent brains.

I would have cabled to you to-day to that effect, but for the following unforeseen circumstance:- Our Cable Code address was arranged for Mr. G. E. Stevens, Manager for the National Phonograph Co. foreign department, - this gentleman severed his connection with that Office, and Mr. Gilmore, informed us to refrain from addressing the National Phonograph Co. in Mr. Stevens Name - therefore we were precluded from cabling to you as anticipated.

Mrs. Albert and myself convey you our heartiest Greetings.

Thanking you again very much for the kindness you have shown to us during our visit, and wishing you huge success with the nickel Ores,

I remain, Dear Mr. Edison,

Your humble Servant,

Alfred Albert

Bantam, Conn. May 24, '02

Mr. Thomas A. Edison,

Orange, N. J.

Dear Mr. Edison: —

Since my last report of May 7 we have completed the work, including general and detail surveys, to the north of the road passing through Bantam, covering some 6 sq. miles. On Saturday last we moved to a place two miles south of Bantam, and are now surveying the country to the south of it, near a new base line, named Morris Baseline, which starts at the stake of the Bantam base line & will continue southwesterly through out the formation.

Several localities of attraction or "folds", varying in extent and strength, were found, descriptions and detailed survey of which accompany this report.

In addition to those described, attractions were found along almost the entire boundary to the west, north and east, of this gabbro formation. The predominating rock is very shistose and in some

places quite ferruginous. It is similar to the sample you examined when I was in Orange, which was taken over a very extensive area of attraction along the western end of the Benton base line, and which I described in my report of Apr. 22. Only two of these localities have been surveyed in detail, owing to the great uncertainty as to the cause of the attractions. I believe these are sufficient for the present time, as to survey closely all the areas, would require many days work.

The detailed surveys were made so as to cover the attractions found on the different lines of the general survey. Where an attraction was found on two or more lines the detail survey with 10' iron line and 5' readings would be quite extensive. Accordingly such close work was confined only to the immediate vicinity of high attractions. The lines between being 20' apart and readings 10' apart. ^{The} ~~The~~ survey maps are all plotted on a scale of $40' = 1''$.

If you will let me know immediately what you wish done concerning any of them, I can easily look after any work from here. We shall doubtless be moving our headquarters farther south before long.

In regard to the Johnson Mine

upon the return of W. L. Scamie from California, he being one of the owners of the surface rights the matter of reducing the amount of land from 18 to 14 acres was considered. The owners declined to make any appreciable difference in the price but proposed to sell the entire lot, 23 $\frac{1}{2}$ acres, for \$100. Believing that the expense of having the 14 acres surveyed, building of fences etc would more than balance the \$25 additional, I decided it would be best to take the entire lot, thereby obtaining the surface & mineral rights of 23 $\frac{1}{2}$ acres for \$175.

The matter was practically settled & Messrs. Scamie, Hubbard and myself made a trip to the lot to locate the four corners. On the way Mr. Hubbard told me of three possible flaws in the deed, which were surprises to me as he had told me the deed was clear, as far as he knew. He says however he started to tell you of one when he was in Orange, but something turned the subject.

The corners were located however & marked but no definite bargain was made. I have finally succeeded in getting Mr. Hubbard to write over the conditions and standing of the title also the kind of deed which shall be given. These I enclose.

(4)

If you wish to purchase the land under these conditions, kindly return the deed and I shall have it executed. I think it would be well to take the property any way, as doubtless we could not get it again at such a low figure.

In regard to the Leamin Mine, Mr. Hubbard rejects your proposition of a guaranteed monthly payment, but is inclined to accept an offer on a royalty basis. If you will make some such proposition, I think you could get the mine at a low figure.

I made a trip to New Haven and saw Prof. Gzurny in regard to the geology of this formation. As a result of the conversation I have omitted surveying the NE corner of this formation as he is quite doubtful as to the character of the rock and I can find no outcrops of gabbro. He thinks it lies however to the southwest all the country to the south. The rock in this vicinity and especially about the mine is technically called gabbro but is practically a diorite.

I have also made arrangements with several men in New Haven in regard to the Canadian

trip and the list with one exception is practically decided upon.

Hoping you will inform me soon in regard to the above matters, I remain

Yours sincerely,
John V. Miller.

file nickel
Canton, Conn. June 2, '02

Mr. Thomas A. Edison,

Orange, N. J.

Dear Mr. Edison:

Since my verbal report of last week we have had such bad weather that the work has progressed rather slowly. The Country along the South boundary of this formation where I thought there was some chance of a "find" was surveyed but with no result. The ground between this & the northern part already surveyed was omitted. The men have now started on the SW. section, where the ground is rougher and the rock, gabbro in nature, is considerably different from that around Prospect Mt.

I have examined a formation of gabbro to the East of here but don't believe it is worth surveying. I am going down to Danbury tomorrow to examine a formation of gabbro or diorite there, which is located on

old nickel mine. If this appears satisfactory, I think we might move the party there. This seems to be the only formation of diorite containing a nickel mine in this part of Conn. If this does not show up will do you wish me to survey the next formation to the south. Even if there are no mines in the vicinity, prospecting of course the rock is the kind of diorite likely to carry nickel?

I have written Ranger Engaging him from the first of June. I think he is well worth the extra amount. I have told him to get all our equipment in shape & ready for us upon our arrival also to engage provisionally the helpers, so we shall be in good shape for immediate work.

Upon considering still more the question as to where to begin work I am inclined to think that the original plan of starting in the Nahamptsee District about where we left off in the last place for three reasons -

We have considerable lengths of base line already cut through and exposed, so that we could start work immediately & there would be no delay for the troche more.

The country is fairly clear & we could watch & drill the run ^{then} much more satisfactorily than in rough & timbered land.

Considerable ground was examined last year to determine the contact ^{but more surveys} and as we have to pay Ranger any way he could cut through some more base lines before our arrival. The work being laid out here Ranger & I would have a good start to survey the ground or rather determine that to be surveyed to the SW or towards Sudbury.

Towards the end of the season we shall be near to the railroad & can get our supplies easily even though farthest away from Sudbury and in rougher country.

Unless I hear to the contrary soon I shall then have Ranger go out to the Gahnapitac

disturb and work on the line.

The route by the water route to Sudbury
is quite high and accordingly I think the
party had better go by Toronto. I could go
a couple of days ahead via Montreal &
get whatever supplies were necessary, seeing
the duty.

Yours very sincerely,
John W. Fuller.

ALBERT D. BURRAGE,
PRESIDENT.

NATHAN F. LEOPOLD,
GENERAL MANAGER.

CHARLES D. BURRAGE,
SECRETARY & TREASURER.

LONG DISTANCE TELEPHONE CENTRAL 226.

ARCADIAN COPPER COMPANY,

402 EQUITABLE BUILDING,

100 DEARBORN STREET,

OFFICE OF THE
GENERAL MANAGER

CHICAGO.

June 4th, 1902.

Answered June 17-1902
Mr. Thos. A. Edison,

ORANGE, NEW JERSEY.

My dear Sir:

Beg to remind you of my visit last November in connection with the "Sultana" mine, and am now in position to state that I think satisfactory lease and option, on the lines of which we talked, can be obtained. The basis at that time was \$1. per ton royalty, with a minimum of \$10,000. per year.

Kindly advise me at your earliest convenience what your desire is in connection with this property, so that I may be enabled to take it up at an early date, which at present seems advisable.

Yours very truly,

N F Leopold

*= Say that my men will be in
vicinity of chaurine about middle
of Sept + will report if I can
then decide if I want to
take the matter up with you*

7

file

Washington Depot. Ct June 14, 02

Mr. Thomas A. Edison.

Orange, N. J.

Dear Mr. Edison: -

Since the last report of June 2 we have surveyed a portion of the south western part of the Prospect Mt. formation. The country was extremely rough with high hills and rock and creek. Only one "find" of any consequence was made but several very small but attractive ones found. A report on two of these I send with this letter, also the detailed survey maps.

As the work proceeded so slowly, the attraction being of about the same character as about Prospect Mt. and not being able to remain longer in the only boarding home in the vicinity, I decided to move down to the extreme south western end of the formation and try this. Accordingly we moved to New Preston Station and are surveying the ground about one mile from here. Within this area is a silica mine. Specimen of quartz from this mine carry chalcopyrite.

or pyrites and believing there might be a pyrrhotite deposit the men are working in the vicinity of the mine, having started yesterday morning.

The formation of diorite shown by the Geological Map about Danbury was examined for a considerable distance but I was unable to find any rock at all similar to the Sudbury or Prospect Mt. diorite. The so called Gold Mine within this area was visited and from all appearances is of no value. The rock in the neighborhood is quartzite and no attraction could be found about the shaft, which has been recently entirely filled. It was reported that some nickel was found there, but I was unable to find any specimen showing pyrrhotite from the dump. Considering these points I decided to make no north surveying.

Accordingly I examined a formation to the East of Danbury, which according to the Geological Map surrounds Bethel and is the largest area of diorite shown. I examined the North western part of this for about two or three miles and could only find three showings of diorite which had a trend about NW and SE and extending for a mile or so. It seemed to be quite narrow

and located in gneiss, which seems to be the general rock of the country. The appearances of this formation were not very satisfactory and accordingly I examined another formation lying between this Wellford and Hartsville. Which according to Percival, contains rock quite similar to that around Prospect Mt.

This formation extends N and S about twelve miles and has an average width of about one mile. It was examined by running lines over half or three quarters of a mile across it, taking specimens of many outcrops. One a great part of the area the rock is decidedly different from the Sudbury diorite, being a grayish mica schist, with small porphyritic points of white feldspar, rock which I don't think necessary to cover.

However within the area was found some showings of rock quite similar to Sudbury diorite and Prospect Mt gabbro, in some places quite hornblende and having the characteristics of eruptive rock quite decidedly. There is quite a belt of this and in the most favorable ground I have seen outside of the Prospect Mt. formation. The place are now to move to this vicinity the first of next ^{week} and

remain there until the end of the month. Our headquarters will be in Brookfield, Conn.

Along with this examination a trip was made to a mine mentioned by Pierce as a copperan mine lying to the East of Farmington, in the Township of New Fairfield. The shaft is almost entirely filled with rock and dirt so that it could not be examined except on the surface. It is located on a ridge of mica schist with no chlorite in the vicinity. There is a showing of deeply stained schist for some 150 ft. and over this distance there is an attraction, with a maximum deflection of 20 and some lower minus readings. It seems to be a narrow strip, running about 20° W of N, of very ferruginous schist. It is located on the farm of Ezra Hatch, whose post office address is Rural Delivery #11, Danbury Ct. Samples of this surface showing were taken and have been sent you today.

I have sent you also five other samples a lot of which are given below. Those from the two finds, namely Nos. 135 and 176, contain specimens of the schist rock lying near the gabbro, and ^{only} to show you the character of the rock on the two sides of the contact.

151

Sitchfield County, Conn.

Sample # 175 Attraction Line # 127 N.W. Rd. 161 Morris Row Line.
 " # 176 " # 144 " 183 " "
 " # 177 From quartz rim of Silice Mine near New Preston Station.
 " # 178 " " " " " "
 Sent for qualitative analysis only.
 " # 179 Attraction Line # 127 N.W. Rd. 161 Morris Row Line.
 Taken from outcrop above locality of highest attraction.
 " # 180 From copperas mine. Town of New Fairfield, Ct.

The Johnson Mine Property has been bought and the deed is enclosed for you to examine before being filed with the town clerk. If satisfactory kindly return it at once and I shall have it recorded in Sitchfield at once.

Yours sincerely,
 J. H. Miller.

Established in Australia since 1862.

A. OPPENHEIMER,
MERCHANT AND MINESWOMAN,
agent for
Nickel, Antimony, Chrome, Wolfram,
Scheelite, Cobalt, Lead, Tin & Copper Ores,
Platinum & Auriferous Concentrates,
Metals, Mottos, and Minerals.



SOLE AGENTS AND PRINCIPAL OFFICE OF AUSTRIAN PATENT
GRANTED TO HER MAJESTY THE QUEEN AT THE PATENT OFFICE
INTERNATIONAL, LONDON, ENGLAND.

LETTER ADDRESS—P.O. BOX 1290, SYDNEY.
CABLE ADDRESS—"PROSPECT," SYDNEY.

File Nickel Ore 17th 1902
Mr Thomas. A. Edison
Orange City, New Jersey U.S.A.

Dear Sir:

re Nickel

I have been reliably informed, that you have become greatly interested in Nickel and that you are prepared to purchase Nickel Ore in large quantities or even take an interest and share in some good Nickel Mining Property, from which you could obtain the Nickel Mineral, which you require. -

I have therefore great pleasure to bring now under your notice a very valuable and important Nickel Mining Property, which I have, awaiting to be developed and to be worked on a large scale. -

The Nickel Mining Property in question is situated in Tasmania and is a property, with which I became connected on the discovery, that it contained large Deposits and Lodes of Nickel Mining Minerals. - In fact the Mountain on which this property is situated has been called and is known as, Mount Oppenheimer. The property afterwards and some time ago was taken over by a Melbourne Syndicate whomupon my connection with it ceased. - This Syndicate however has scarcely done anything in the way of opening up the property or working it and owing to the death of the chief financial Member of this Syndicate, the Syndicate has been dissolved, and the Property has come back into my hands. -

The Property is situated in the county of Russell on the West Coast of Tasmania near the Haywood River and close to Railway connecting with Shipping port at Emu Bay, whereby cheap transport of Ores etc is assured. - It consists of 160 Acres held under Mineral Lease from the Government of Tasmania. - It is in four Sections adjoining each other, One of 30 Acres, Two of 40 Acres each and One of 40 Acres. - Together 160 Acres. -

Established in Australia since 1867.

A. OPPENHEIMER,
 MANUFACTURER AND MINEOWNER,
 Sole Agent of
 Nickel, Antimony, Cassiterite, Wolfram,
 Scheelite, Cobalt, Lead, Tin and Copper Ores,
 Pyrites and Antimony Concentrates,
 Manganese, Bauxite, and Miscellaneous.



SOLE AGENTS FOR THE STRAITS SETTLEMENTS AND THE FEDERATED MALAY STATES.
 10, ROBINSON ROAD, SINGAPORE.

LETTER ADDRESS—P.O. BOX 1899, SYDNEY.
 CABLE ADDRESS—"PROSPECT," SYDNEY.

Sydney, *Specs* 14th 1902

Mr Thomas A. Edison

No 2. continuation of letter re Nickel

The Nickel found in this Property is contained in an Ore of Nickeliferous Magnetic Pyrites (Pentlandite), Magnetite Iron Ore (Pyrrhotite) and Carbonate of Nickel (Siderite) in serpentine Rocks.

Assays which have been made of some *Representatives* of this Ore gave the following very good results viz

Nickel 36%

Nickel 35.1%

Nickel 14.50%.

These Representative ore taken from various points and from several distinct *Lodes* in the several sections comprising the property and together with actual shipments of Ore which have been made they give assurance of an *Average output* of a 20% Nickel Ore. I have no doubt you are well aware that this is an *Exceptionally rich* Nickel Ore, much richer than anything found or known to exist anywhere else. The New Caledonian Nickel Ores average from 5 to 8% and the *Episkopi* (Canadian) Ores contain only from 1% to 3% Nickel. Any *European Nickel Ore* to be mined is also much easier and cheaper to mine and refine than either the Canadian or New Caledonian Nickel Ores.

Notes: of these there are several as proved in *Shallow Surface workings*. The *Spain Lode* has been traced over 5 chains along its strike and other *Lodes* traverse the ground at various angles and dip, indicating large *Nickel deposits* at *unfathomable depths*. The *Spain Lode* rather is from 12 miles to 3 feet thick but very numerous *other veins* occur, forming a *network* of *commercially valuable* Ores in *soft country*, which can be mined and *raised* at *very little cost*

Established in Australia since 1867.

A. OPPENHEIMER,
MERCHANT and MINESWNER,
WORKS OF
Nickel, Antimony, Chromes, Wolfram,
Scheelite, Cobalt, Lead, Tin & Copper Ores,
Platinum & Auriferous Concentrates,
Kiesels, Bauxite, and Minerals.



READ HERE, THE NUMBER, SERIES & DATE CERTIFICATE
ISSUED TO, AND A SPECIFICATION OF THE MINES
INTERESTS, QUESTION, ETC.

LETTER ADDRESS—P.O. BOX 1269, SYDNEY.
CABLE ADDRESS—"PROSPECT," SYDNEY.

Sydney, June 17th 1902

Mr Thomas A. Edison

N. 3. continuation of letter re Nickel

and requesting but simple treatment to render their concentration very payable. -
These Nickel Lodes occur at an elevation of 600 feet above the Haywood River
and they can be very economically opened up and worked by means of this as tunnels
In addition to these valuable Nickel Mineral Lodes there are very vast
Deposits of poor quality Nickel Mineral which so far, being too poor
to ship away for treatment have not at all been taken into consideration
in establishing the undoubtedly great value of this Nickel Property. -
Nevertheless, sufficient quantities of them for all mining purposes can be obtained
from the Haywood river, only a mile distant from the property. -
Timber: is to be had in abundance on and close to the property. -

I am desirous to work and develop this property to its fullest extent
and capabilities and if you are prepared to join me in the undertaking
I offer you One Half Share and Interest in the property for £4500 In Cash
or if you wish a larger share than a Fortieth Share and Interest for £6000 In Cash.
If you will permit me £1200 In I will in return for such remittances
ship to you as a Dispatched 100 Tons of Nickel Ore from this property
quality not less than 50% Nickel Metal in the Ore and consider such
a sample shipment must be a good proof as to the value of the property. -

Awaiting favor of your reply, if possible by cable

I am yours faithfully

A. Oppenheimer

If you cable me my Cable address is
Prospect. Sydney and open the A.B.C. Code }

San Mallory
 \$ 2000. per month for Randolph
 Luching, Ont.
 Mr. Thomas A. Edison,
 July 17, '02

Orange, N. J.

Dear Sir: I

In answer to a note from
 Mr. Randolph received today I
 give you the following estimate
 in addition to that previously
 sent you, namely the expenses
 for July.

Estimate for August		
12 Middle Run	@ 2 ⁰⁰ per day -	648.00
1 Amelanchier	@ 3 ⁰⁰ (2 days)	81.00
1 Suede	@ 3 ⁰⁰ (2 days)	93.00
9 Cook	\$70 per man the (7 days)	70.00
2 Hoppers	@ 1 ⁰⁰ per day (2 days)	93.00
2 Hoppers	@ 1 ⁰⁰ per day (6 days)	81.00

Groceries & general supplies 250.00
 200.00
 Sundries 200.00

As in round numbers \$1700 - which
 will be the monthly expenditure.

For fear you did not receive
 my other letter I will add here
 that the expenses up to the first
 of August is as above for July, with
 the addition of these items -

Guide - Month of June 70.00
 Tent & camp equipment 100.00.

I asked for 2000 in all, to be
 sent me before Aug. 1st.

I should think it would be
 well to put the monthly allow-
 ance at 2000, which would give
 us chance to make pay ments on surveys have been made as I

some of the lots which we apply
 for and which success most likely.

You might like to know that
 Gibbs has taken out two claims
 a little east of our claims, in the
 locality where I had hopes of strik-
 ing something good. He has made
 arrangements with the Governor
 to work a diamond drill on one
 claim.

We have made one find of quite
 high attraction & another one much
 lower. I have put in applications
 for both. There is some doubt
 about whether they are still in the
 hands of the Government. No detail
 surveys have been made as I

am moving our camp farther
west to head off Libb.

I have noticed that Libb men
have apparatus exactly like some
of ours.

Hoping to see you up here be-
fore long & expecting to send
you a more complete report
in a few days. I remain

Yours very sincerely,
John V. Miller.

1902-07-19

Grayley — This shows what our prospects
are doing — get 13 College graduates, please
return

This letter promising
copy.

Edison Camp Th

Mr. Thomas A. Edison.

Orange, N. J.

Dear Mr. Edison:

A complete report of the magnetic
prospecting work in Canada so far carried
on is as follows:

The party arrived in Sudbury
Friday noon, July 9. Spent the afternoon &
night there getting a few supplies and packing
and arranging our personal effects.

Thursday morning the entire party consisting of
the 14 men, Ranger, cook and three helpers,
started for camp in the township of Falembridge,
in the S.W. corner of Lot 6, Con. V. The camp
supplies were ready for us, a helper having been left
in charge. The men made men were instructed in
the use of the machine during the afternoon taking
readings over a small showing of the N.C. Co.
The next day also was spent in geologic work.
The men did very well & I believe they will
make a good crew & do good work.

From this camp we surveyed the following lots -

Lot 6, Con. IV - Entire
 " 7, " V - Same thing $3\frac{1}{4}$
 Lots 7, 8, 9, & 10 - Con III - Northern portion -

Hint: an extensive area of attraction was found in the central portion of Lot 7, Con. IV, giving readings of 20 on normal line, at one place readings of 90. Some work had already been done here but as there was no record with Mr. Ryan of the lot being leased, patented or applied for, an application for the same was filed.

In the central & northern portion of Lot 6, Con. IV, a much smaller find was made, having an area of about 1600 sq. ft. with a maximum reading of 28, with some negative attraction. A portion of the lot covering this area was applied for.

Coming to the fact that Gibbs party had surveyed all the territory about this camp & believing that he was expecting to soon move further North, I considered it advisable to move into new territory & consequently

(3)

the camp was moved to Lot 8, Con. II of Mac Lennan - from where we shall survey the territory farther to the N and E of that selected for this season. Owing to the Indian move & the question as to ownership of the land detail survey of the find in Lot 7, Con. I was postponed for the present.

Thus far we have covered the following lots in this region -

Lots 8 & 9, Con. II

" 9 & 10, " III

Southern portion -
Three finds, one quite extensive, have been made. Detail surveys will be made very soon.

The following items of news will doubtless be of interest to you -

Work at Copper Cliff & throughout the operations of the old Canadian Copper Co. have been largely suspended. The report is that new & modern machinery is being installed, & another that the supply of matte for the Oxford Company is sufficient to supply that plant for several months & further.

Mining & smelting work is not necessary at present. The Algoma Central, i.e. Clergue, has made a survey for a railroad to Grampian & Blue Lake regions & proposes a line betwixt the entire Sudbury mining district, including the north range.

Little has been arranged with the Government to sink a government diamond drill on one of the claims in Falconbridge for which he has applied.

The new Balmoral Hotel in Sudbury has been completed & is far superior to the American House.

I have been working the men in two squads, believing that better work is made than by having 15 men in line. Any delay of one man retards the entire line. Three squads would be still better & as soon as the men are well acquainted with the work I shall put one man in charge of a squad. By this method we could use one or two men more. We have plenty of room for them & the cost of supplies would

(5)

be increased very little. Ed Miller is ready to come up on short notice and I think he would make a good man & I would do him a world of good. Kindly advise me immediately.

Wishing you and wife us at this camp which is most convenient & pleasant & hoping you will be with us soon, I remain

Yours very sincerely
John O. Miller.

Army Exploration Co
Camp- ~~file~~ ^{Hotel} Exploration Co
Essexbury - July 30, '02

Mr. Thomas A. Edison,
Orange, N. J.
Dear Mr. Edison: —

Since the last report of the 23rd we have completed the general surveys of the following lots: — Maclean - Lots 8 and 9, Con. II
" " " 8, 9, " 10, " III
and will finish by tonight " 10 " 11, " I
We have also completed all the detail surveys with one exception in all these lots, excepting the last two men worked.

Following is a description of the different "finds" or areas of attraction. Maps, both general and detail, also samples are being sent with this report. It would be advisable, I think, to have the analyses made immediately and for you to notify me as soon as possible what areas you wish to hold. I have applied for the lots rather promiscuously, with the idea that you will notify me just what areas you wish to keep before the first payments are due, so that we can include and change these applications accordingly.

The country in this vicinity is quite rough with high & barren ridges and cliffs. Between these are swamps and small ponds. In concession II the rock is almost entirely covered with granite, while in III it is pretty much exposed, along the sides of the hills especially. The rock consists to the east of a mixture of pinkish granite, quite coarse grained, and fine grained diorite or trap. West to the road it is a uniform mass of large crystallization with considerable hornblende and light green crystals of feldspar. Along the western border of lot 10, Con. III, the rock is seemingly a hornblende granite.

In Concession III, lot 10, and northward there are several mining claims located in rock similar to that in this vicinity. From one small prospect pit, on a claim of "Bob" Tuffe, I send you a sample, from which you can perhaps judge the value of the "finds" so far made. But this pit quite too attention was obtained.

The general survey is divided by lots and all the lines in Mac Lennan have been run east and west. The lines are 100' apart and the readings

20' apart, both being plotted on a uniform scale of 200' to the inch.

In the general survey when a reading of four or over was found 5 ft. readings, to each side, were taken. On the map the regular reading is enclosed in an circle and the readings to the sides are plotted in smaller figures. When the readings to the sides were lower than the regular reading no detail survey was made. In a few instances lower readings were obtained over an area of considerable extent. These detail surveys were made only about the places of highest attraction. Applications are filed however for the entire atlas area.

Attraction and survey # I

This is located in Lot 6, Con. V of Falero bridge. As yet I have not examined this carefully nor sampled as explained in my last report!

Find in Mac Lennan.

Attraction and survey # II

This is located in Lot #8, Con. II (Line 23-25 Reading #124) on side of high ridge where the rock is well exposed. The rock is probably a mixture of fine grained diorite and granite bed near the NE end of the base line there is a small outcrop of quartzite. No strike is at summit of ridge while the NE end of the base line is about half way down the side of hill.

(7)

Attraction #III

This is located in Lot #6, Con. II (Line #28 Rd. 18) at the foot and side of the same ridge as #II but on the western slope. The rock is exposed in several places and consists of the mixture above mentioned. The side of the ridge is quite steep and about 150' in height. The base line is parallel with the foot of the slope and close to its base.

Attraction #IV

This is located in Lot 8, Con. II (Line #30-34, Rd. 72) on the summit & near the middle of the above mentioned ridge. The rock is very thin exposed and no sample could be obtained in places of attraction. The surface is fairly level. The rock is probably the mixture above described.

Attraction #V.

This is located in Lot 8, Con. II (Line #39, Rd. 22) at the western foot of the same ridge as the three foregoing localities. A high cliff of rock limited the view to the NE. The area surmounted was covered with rock which had evidently broken off from this cliff. Samples were taken of these broken pieces which show the rock to be a fine grained

(5)

diorite with some granite of a pinkish color.

Attraction ~~II~~ ^{III}

This is located in Lot #9 Con. II (Twp #37-39 R. 53) on the summit of the same ridge as the former. going "finds" in a NW and SE direction from the attractions II and III. It is near the NW termin-
ation of the ridge, which slopes quite abruptly, some 300', to low and marshy ground, through which flows Marney Creek, a stream of moderate size. The surface is fairly level as far NW as line #43 which is at brow of hill. There is a small rise of some 40' running about E and W, about 100' SW of #5 stake.

No sample could be obtained in the vicinity of the attraction but 100' NW of stake #43 a sample was taken of the rock thus exposed. From this it is probable that the rock covered by the survey is the same as that about the other attractions on this ridge.

The attractions above mentioned, excepting #III, seem to be more or less connected in one belt, having a north-westerly trend.

Attraction ^{IV} ~~V~~

This is located along western boundary line of lot 8, Con. II, extending into lot 9. (Twp #31-53 R. 7) It is along southern and south-eastern brow of a high bluff of rock, some 400' in height, and across the low marsh, in a NW direction from attraction #VI. The rock consists of a mixture of pinkish granite

(6)

are fairly fine grained diorite, the separation between the two being more distinct than in the vicinity of the above "finds". The detail survey shows two areas of quite high attraction, samples from each of which must be taken. The diorite is somewhat more algid.

Attraction #VIII

This is located in Lot 9, Con. II (Lines #23-36 Rd. 50). It is on the Eastern side and summit of a high ridge, some 1000' high, across a low marsh, from the ridge on which are located "finds" II to VI. The surface on the summit is very rough with low remaining outcrops and the side of the ridge is very steep. In this locality there is an extensive area of quite low attraction, as shown by the general survey, with two areas of high attraction, which are covered by this detail survey. The area to the SE is at base of ridge, while that to the NW, near stake #58 is in a fairly level country, broken by rounding outcrops.

Stake #58 is on the top of a small knoll of rock, surrounded at radius of 20' with much larger outcrops or knolls. In the immediate vicinity of this stake there is considerable attraction, even higher than that shown on this detail map. On the surrounding knolls, very slight, if any attraction, was obtained. Separate samples were taken of the small and larger knolls for comparison. Also a picture of this immediate vicinity was taken, which will be

(7)

Send you as soon as finished.

Attraction #IX

This is located in the SW corner of lot 10, Con. III (Line #4, Rd. 225). It is on the summit of a dome of rock, of a granitic appearance on the surface, but containing some thin blades. The dome is about 100' in height above the level of Mearry Creek which flows near its base. No diorite could be found in the vicinity. Sample was taken as well as a photograph, taken from a point on the creek SW of the dome.

Attraction #X

This is located in lot #10 Con. III (Line #12 Rd. 227). It is along brow and summit of high ridge some 1000' NNE from "finch" #IX. Ridge slopes quite abruptly to SE for 50', then there is a gentle slope to Mearry Creek. Stake #0 is at brow of ridge. To the NW of 0 the surface is somewhat rough with low outcrops, but mostly covered with dirt; about stake #0, rock is exposed and to the SE is again covered. Rock consists of diorite, containing considerable horn blades and light green points of epidote. It is of quite large crystalline texture. The nearest granite is that at "finch" #IX some 1000' away.

Attraction #XI

This is located in lot #11, Con. III (Line #20 Rd. 240) in a fairly level country broken with numerous low outcrops. Rock is a diorite of large crystalline

(8)

with considerable brown bluish and light green points of feldspar. No granite could be found in the immediate vicinity. Attraction # XII

This is located in Lot #10, Con. III (Lin #15 Rd. 212) It is on the top of a high hill of considerable extent and near its eastern termination, overlooking Massy Creek. The surface is fairly level & somewhat rough with low outcrops. Rock is a diorite similar to that of "find" # XI.

Attraction # XIII.

This is located in Lot #9 Con. III (Lin #40 Rd. 50) in a fairly level region. The highest attraction is at the northern termination of a rather small and low knoll or outcrop. The rock consists of a fine grained diorite, somewhat mineralized. To the SW, some 800', there is a small outcrop of granite.

Attraction # XIV

This is located in Lot 10, Con. III (Lin #40 Rd. 111) within 200' of Toff's claim on which is located the proposed pit, a sample & survey of which is being run. It is on the side and top of a high and steep ridge, the highest attraction being partly down the side. The rock is a mixture of granite and fine grained diorite. The bare line runs N45 along the cross of the ridge.

A striking characteristic of these areas of attraction is that they are mostly all situated on the

(9)

edge of cliffs or ridges. In no instance was there any sign of gooson, and only in one or two cases was the rock at all stained. In those areas where there is low attraction over a considerable extent, higher attractions were generally found over a small prominence.

During the past week we have had considerable rain in the afternoon which has allowed us to work only in the mornings. The country is quite rough with ridges, thick brush and mudfalls and owing to the fact that so many "birds" have been made we have not covered as much ground in the general survey as otherwise.

I ship by express sampler #192 - #208.

Yours very sincerely -
John F. Miller.

Edison Camp, II


OK TAG
Al Cooksey,
Edison Laboratory,
Orange, N.J.

Dated July 31, 02

(661)

Dear Al:

I think that it will well, in fact, quite necessary for us to have a few more needles for stock. We are having some trouble with a few.

Therefore will you immediately order 1/2 doz more dip needles, to be made the same as the last lot with graduation only on one side of needle, & with an oblong hole for carrying wire, in supporting part.  in that instrument.

more fully and more but cannot give evidence. If you do not understand this John Kerr will explain more fully. Also make to have a short iron arm to balance.

When Mr. Edison comes up he can bring them if he will then saving duty on them. Have Call Grid make a case for them similar to those made for wires.

Yours truly

J. T. Miller

Write Miller & (1)
any I do not think
Camp Edison - which of any of the
finds described in letter
of Aug. 11th - it worth

Mr. Thomas A. Edison.

Orange, N. J.

Dear Mr. Edison;

I don't think it worth
while to apply for
them -

Since the last report of July 30th we
have completed the work in the human, covering
lots 6, 7, 8, 9 and 10 Con. I, having also made detail
surveys of the different "finds."

The attractions in lots 12, Con. I and II were
surveyed in detail but as these surveys, in the majority
of cases, showed up very poorly I shall state in a
general way, that they are located in a country
quite rough with outcrops and high ridges, more or
less covered, and that the rock is mostly the
Cambrian slate of the central formation of this
district. They are mostly located on the summits
of outcrops or ridges. I judge them to be of little
value for nickel. Those which have a fair show-
ing of attraction, I shall describe separately as
follows -

Attraction XVI

Lot 12 Con. I

Line #5 Rd. #264

This is located in the NW corner of the lot

in rough country and on the summit of a fairly large, but low, outcrop. The rock is the Cambrian slate, in specimens of which considerable pyrites can be found. The base line crosses the outcrop in a N & S direction. (2)

Attraction # XXIV

Lot 12 Con. I

Line # 25-26 Rd. 228

This is located on the side of a steep slope to the west, on Cambrian slate. The base line runs diagonally up the slope, the stake being near the bottom of the hill on line # 26.

Attraction # XXV

Lot 12 Con. I

Line 34 Rd. 179.

This is located on side of a hill sloping to the west. The rock is Cambrian slate. The attraction shows a small vein of magnetic ore.

Attraction # XXV

Lot 12 Con. II

Line # 2 Rd. 260.

This is located on side of hill, near its foot, where the rock is exposed over a large area. The rock is quite coarse grained and is similar to the gabbro about Prospect Mts. Conn. The attraction is quite low however and the "find" is hardly worth holding.

Attraction # XXVI

Lot 11, Con. II

Line # 17 Rd. 123.

This is located in rough country, on an outcrop and near its western end, where there

(3)
is an abrupt drop of some 40 ft. The rock is a diorite of large & light green crystals of feldspar. A dyke of dark green, fine grain diorite passes through the center of the high attraction, in an E-W direction. The stake is on summit of the outcrop about 30' from the drop off just mentioned.

Attraction XXXI

Lot 10 Con. II & III

Line 53 Pol. 117-

This is located on the road side of a hill projecting into the Mauney Creek basin mentioned in the last report. The rock is exposed on Hill Side, on west side of bare line which runs parallel with the hill near its base. The rock is the diorite before described, being of large crystalline and light green points of feldspar.

The attraction is rather low but owing to its location relative to the mines opened farther north, such as the Tuff Claim, it might be well to hold it.

The attractions found by the general survey of lots 6, 7, 8, 9 & 10 Con. I were examined but found to be of no value, there being no higher attraction than 5. Those in lots 6 and 7, are not quite accurate owing to the bad adjustment of the needle of our man. The attraction of 5 should be 2 or 3.

Together with this survey we also made surveys in detail of the attractions in lot 6-

Con. II of Falcon bridge - as follows -

Attraction # XXXII

Line #26-27 Rd. 24-

This is located in low country, the central part of the survey covering a swamp, the SE extremity a small rise and the NW extremity a large outcrop. It is practically a continuation of attraction #I, which is located on the small rise just mentioned. The rock is chert, with granite or quartzite a few hundred feet to the east.

The head of the attraction is on the SE end of the survey and accordingly is located in the southern half of the lot which I have just learned, has been previously applied for this application also covers the attraction #I.

Attraction # XXXIII

Line #31 Rd. 30.

This is located on the brow of a ridge running N & S, some 500' east by a little N of the above attractions. The find is quite close to the contact but the poor attraction hardly makes it valuable enough to hold.

This completes the report of rock up to date. Be are now located in Con. II of Falcon bridge and intend surveying the lots in this and the North concessions, which have not been surveyed by this last years survey.

(5)

Again I have had no reply to my letters
in regard to what ground you wish to ex-
tend kindly advise me on this point at
your earliest convenience.

Hoping that we may see you soon, I
remain -

Yours sincerely,
J. L. Miller

P.S. One of the men from Yale decided to
leave us, professing that he could not stand
the work. He was rather light build and
I think his main reason was that he
did not like the rough life and hard
work. I have always feared Ed Miller,
who will doubtless take the place.

J. L. M.

Amended
9/2/02
Edison Camp - file

Swabing - Aug. 23, '02

Mr. Thomas A. Edison -
Orange, N. J.
Dear Mr. Edison,

Since the last report of Aug. 11th we have
surveyed the following lots -

Falcon bridge - Con. II - Lots 8, 9, 10, 11, & 12 -
" I - " 8, 9, 10, portions of 11 & 12.
Garmon " III " 2.

This completed the work in Falcon bridge where
four localities of attractions were found, while
in the lot in Garmon two localities were found.
A description of these follows - General and detailed
survey maps together with samples are being sent
you.

Attractions # XXXIV

Falcon bridge - Lot 8 Con. I Lin #45, Rod. #05

This is located on northern side of an extensive ridge
some 70' in height, having a NW direction. The
rock is exposed continuously and is a diorite. On
each side of the ridge is lowland, mostly swamp.
About 50' south of the place of highest attraction
the diorite is somewhat stained and mineralized,

(2)

but at the place itself the rock is not exposed. There is no evidence of granite or quartzite within 1000'. The survey shows rather low attraction and very small in extent, but owing to its general location relative to the showings in Lot 7, Co. I it might be well to hold it.

Attraction # XXXV

Falcon bridge - Lot 9, Co. I

Lines #17-20 Rd. 200

This is located on summit and southern termination of a ridge which has an abrupt drop of some 50' to a small pond. To the north there is a general slope of some 800' to low & swampy land. The highest attraction is along the edge of the cliff. The rock is a diorite. No granite could be found in the vicinity. The survey shows quite an extensive area of attraction, which is quite high. *No stake is on the western side of the ledge near the cliff and the base line runs diagonally with the edge of the cliff, which limits a few lines on which high readings were being obtained.

Readings were taken later at several places, where possible, along the foot of the cliff but no attraction was obtained.

A picture of this cliff, taken from southern or opposite side of pond, accompanies the report and will give you a better idea of the locality.

Attraction # XXXVI

Falcon bridge Lot 9, Co. I

Lines 15 & 16 Rd. 90.

This is located on southern side of a gently

(3)

sloping ridge bordered by swamp land. It is within a belt of diorite. The survey shows such a poor attraction that a further description is hardly necessary. A sample of the rock in the vicinity is included with the others. No sample could be obtained at the place of highest attraction.

Attraction # XXXVII

Falcon bridge - Lot 10 Con. I

Line 11, Rd. 159.

This is located on Eastern side of a prominent out-crop, surrounded, to the east by swamp and other sides by the gravel bed. The rock is somewhat similar to the Cambrian slate found in Lots 12 of Mac Lennan. No granite is in the vicinity.

A strike is at about the middle of the slope. The base line runs at right angles to the same.

Attraction # XXXVIII

Barren Lot 2, Con. III

Lines 16-18 Rd. 122.

This is located on a low rise within an extensive swamp, surrounded by fairly high ridges. It is about in line with the Kirkwood and Ogdenman mines and about one mile distant from the latter. The rock is not exposed in the immediate vicinity but the rock of the nearest outcrop is diorite. The attraction is quite extensive but also quite low. However considering its location it might be well to hold it.

(4)

Attraction # XXXX

Garrison Lot 2, Co. III

Lines 7-9, Rd. 147.

This is located on the edge of a swamp and at northern foot of ridge, with gently sloping side. It is located between the former "find" and the Cryderman mine and about in line with them. The general survey shows an extensive area of low attraction, a portion of which the detail survey covers.

There is no exposure of rock in the vicinity of the attraction and the bed rock is undoubtedly covered.

About midway between these two finds there is a small showing where some rock has been done, and the rock is considerably stained and mineralized. It is rumored that there are several applications on file for this tract but as there is no record of such in Mr. Ryan's office, an application will be made.

On the 20th the camp was moved to "Headquarters" or lumber camp of the old Emory Lumber Co. At present we are working along the northern contact of the belt of diabase and which is located the Cryderman mine. We shall next cover the ground between the patented land and the nearest exposure of quartzite to the south of the Cryderman & Kirk Hotel mines.

Upon the completion of the work in Garrison

(5)

We shall move farther south to a belt of chert
along the line between the townships of Garson
and Nelson. Within this belt a few shavings
have been discovered, one during the past spring,
which from all accounts appears to be quite
good, except that the ore is quite high in
copper. The belt has been little prospected and
owing to its nearness to the C.P.R. I think
it might be well to cover at least some
of it.

With hopes that you will soon be with
us, so that you can see the different "finds"
and again enjoy camp life, I am and

Yours truly
J. V. Miller.

[ATTACHMENT]

37 - 35 the Great
 off of 40 - 100
 Chute 610 - 600
 30 - 40 - 100
 35 - 100
 30 - 100
 30 - 100

(2)

line lies between two of these small hills. The rock is entirely covered around the base and so no sample could be taken. It is however doubtless diorite, judging from the surrounding.

The attraction is low but owing to its closeness to the contact & the extent of the belt, a portion of the belt covering the entire belt has been applied for.

Attraction #XL

Garon Lot & Con III

Line #31 & 32 Rd. 100.

This survey also covers a portion only of a belt of low attraction having an E & W attraction and extending nearly across the lot. The survey is located in a country fairly rough with rocky hills. The rock is diorite except for a small patch of quartzite near the stake.

Attractions XLII, XLIII & XLIV

Garon Lot & Con III

The surveys of these "finds" show so purely that any description is unnecessary.

Attraction XLV

Garon Lot & Con III

Line #9, Rd. #2

This survey covers part of the western portion of the belt immediately under #XLII. It is located in quite flat country where the rock for the most part is covered. There are some

(3)

Over a few low rises where the rock is slightly exposed showing it to be a coarse grained and quite dark diorite. Granite could not be found in the immediate vicinity, but the line of contact can be judged from the fact that the general survey lines were run to the north some 200' over exposed quartzite.

Attraction XLVI

Garrison Loc 5 Con. III

Line #0 Rd. 72

This is located in country quite similar to that described under the foregoing "find" # XLV. It is on the eastern side of a low rise some 400' west from XLV and is probably a continuation of the belt running across Loc 4. The rock covered, varies considerably, there being outcrops of very black diorite, quartzite and hornblende granite.

Attraction XLVII

Garrison Loc 5 Con. III

Line #3 & 4 Rd. 110

This is located about 600' NW of the former find on the summit and NW side of a fairly low ridge. The rock is diorite of quite fine grain. No granite in immediate vicinity. The NW portion of the survey shows fair attraction.

Attraction XLVIII

This attraction is of no account.

④

Attraction # XLIX

Larson - Lot 5 Con. III

Lins # 18 & 19 Red. 85.

This is a portion of a belt of low attraction extending E-W partially across the lot. It is located at the southern base of a low hill rising out of swampy country. The rock is not exposed in the vicinity but the survey is within the main belt of diorite.

The survey, as similar ones previously described, was made to show in more detail the character of the larger belt of attraction shown by the general survey.

Attraction # I, II, III, & IV

Larson - Lot 6, Con. III

These "finds" are of no value, as far as attraction is concerned & no description is necessary.

Attraction LIV

This is located on slightly raised ground surrounded mostly by low & rather swampy country. About the base line no rock is exposed but to the NE of # stake some 30' there is an outcrop of diorite. The "find" is quite close to the contact between the main belt of diorite & granite. A sample was taken where possible in the vicinity of the survey.

(5)

All these "finds" can be quite easily reached from branches of the Embury Lumber Co. railway, which has been abandoned & the rails & ties removed over much of the road bed.

Three "finds" were made in Lot 7 Con. III of Gannon, but as yet they have not been examined nor sampled.

Your letter in regard to the different "finds" which you thought advisable to keep was received after some delay in the Embury post office. Also your letter of the 24th Oct.

I am sorry to say that some of those you selected namely all in Lot 10, Con. III of Mac Gannon are unable to get owing to there being a previous application for the entire lot by R. Tough. However he has done no work on the lot outside of his two mining locations WD4 and WD8 and perhaps for a reasonable sum, he would transfer his application to you for the ground we desire. I shall make inquiries in regard to the matter.

Notification was received from the Crown Land Dept. to the effect that the lots we applied for in Mac Gannon are still under timber

(6)

license. However as there is no good timber on the ground we desire, I think a satisfactory arrangement can be made with Hall and Graves, the licensees, whereby they will their consent to the Dep't to allow a lease granted to you. I shall inquire into this matter also.

I have not been able to get definite and up to date information from Mr. Ryan in regard to the patented and applied for. We have answers to our applications been as all prompt. Should it not be better to carry on all this work through a Sudbury lawyer. I am informed that most mining applications are sent through Sudbury lawyers who have representatives in Toronto who immediately file the applications at the head office and investigate and report immediately in regard to same.

I also enclose with the survey maps a detail survey of the Coy derrick Mine which I think is quite complete. From the location of the pits, derrick marked in red pencil, and the engine house, in blue pencil, you can doubtless locate the bare line of the different high attractions.

(7)

Many inquiries have been made concern-
ing your visit to Leabury, by naming
me. I have been unable to give them
a definite answer. If you are not intend-
ing to come it might be well to let me
know so I can inform all inquirers.

The month of September is fine up here now-
ever and I think you would enjoy the
life. It would be a great advantage also
if you saw some of the "jinks" at least.
Trusting we shall yet see you with us
Leabury.

Yours sincerely -
John H. Miller

File Under

Shelbury. Apr. 8-02

Mr. T. A. Edison

Orange, N.J.

Dear Mr. Edison: —

As I informed you before that I have found it advisable to divide the men into two or three groups, it has been necessary to give extra work & responsibility to two men. I think it only fair that they should receive more pay, as they work in the evening, stoking the rudding, besides having the responsibility. I wish your authority for increasing their wages to 2.25 and 2.50, per day, as circumstances require.

I also would like to suggest that you make the men on offer similar to that of last year ^{or more} and to paying a bonus for the men ^{or more} who did ^{or more} the time or mines, which will be worked. I think it will spur them on & will assure thorough work.

In regard to the analysis of the sample sent from here I would say that the my mind the chief determination would be that of magnetite iron in the rock. In only very rare cases probably shall we get out on the surface. A magnetic iron determination should show perhaps the cause of the attraction. It was with this idea I have sent samples of all the "finds" regardless of their bearing mineral or not.

Hoping to hear from you at an early date I am, regard to the above question I will close with one more question. Much land along the divide belt, which we have been surveying, that in McKinnis south of the Stobie Mts, for instance, is held for farming purposes only. If you have no objection I shall survey all the lots upon which the mining rights are not already sold. Satisfactory arrangements can be made with the farmers doubtless and as

Much farm land is well located in
the wheat belt, I think we should
survey it.

Yours sincerely
J. V. Miller.

Put in my basket with
maps & so I can see it
Monday
Camp Edison

Mr. Thomas A. Edison -
Orange, N. J.

Dear Mr. Edison:

Since the last report of
Sept. 2, the following lots of portions have
been surveyed -

Garrison - Lots 10 Can. III Portion unpatriated
" 11 & 12, " II Western portion
Blizard " 1 Can. II
" 1, 2 & 3 " I

Also made detailed surveys of finds in these
lots. A description of these considered
favorable follows -

Attraction LV
Garrison - Lot 7 Can. III Line #5 Rd. #33

This is in country fairly level immediately
about survey but is bounded to the south
by quite rough country with high outcrops.
The rock is mostly covered but a sample
was obtained at two small exposures. Rock
is diorite with no show of granite in
the vicinity.

(2)

Detail surveys were made of two other localities of attraction but the attraction is so poor that the maps & descriptions are unnecessary.

A few small attractions were found in Loc 9, Com. II but are of no value. Also one in 10, Com. III

Attraction # LXV

Blizard - Loc 1 Com. II

Lines 52 & 53 Rd. 100

This is located on eastern side of a large outcrop in a country rough with large and high hills of rock. About 20' from the bare line to the SE there is an abrupt drop of some 20 ft. It is situated along the line of contact of diorite and quartzite, the latter to the south. The diorite is quite coarse grained & dark green and some specimens are quite mineralized. There is deep stain in two or three small patches. The quartzite belt is indicated by gneiss rock immediately along the contact, & south of this is quartzite.

The bare line runs N $\frac{1}{2}$ E and is about parallel with the contact.

At Stake #5 there is a patch of deep stain.

or

(3)

Attraction # LXVI

Blizard - Lot 1, Con II

Line #47 Rd. 211

This is a portion of a belt of attraction running about S + W through northern & Eastern portion of lot. The country is quite rough with chertrocks and the rock is exposed in several places, and none showed any stain. It is located along a contact of diorite and quartzite the latter to the south. The diorite is coarse & fine grain and in some places phosphatic. In the detail survey you will notice that a few lines are extended Southward considerably beyond the others. This was done to cover an outcrop of quartzite, a considerable portion of which was deeply stained. Like attraction was found here and it is probable that the stain is due to magnetite in the rock and not pyrrhotite.

The survey shows a fairly good belt of moderate attraction.

This and the following are along the same belt of diorite as the Blizard Mine -

(4)

Attraction # LXVIIBigard-Lad 1 Con. IILine # 33 Rd. 175

This is also only a portion of a belt of attraction running through the NW portion of the Co. The country here is quite sublevel and level and rock is exposed only in low open outcrops. Here the highest attraction was obtained, namely about #0 and to the east no rock was exposed. The belt of attraction is quite extensive and the readings are quite high. It is located mostly on blivite and along the contact of this rock and quartzite. One outcrop of the latter had a patch of deep stain but no readings were obtained over it.

Although the adjoining lot to the west is patented we made a general survey of a portion, following the belt of attraction. I send you a map of this with the idea that perhaps you would like to take this up in some way.

Three three Card "Jinks" seem quite favorable and I have applied for the portion of the lot covering same, and think it would be well to

(5)

make full payments on them, immediately upon receiving favorable word from the department.

We have made detail surveys of several birds in lots 1, 2 & 3 Com. I of Bly and but as yet I have not examined them carefully and am not prepared to report on them. They are all however considerably smaller than the above.

Among the samples I included one taken from a prospect pit in lot 10 Com. III of Carson. It is a specimen of a kind of ore over which the highest grading has been. I send it with the idea that you will have it analyzed & also determine its degree of magnetism.

The balance in the bank here has increased considerably owing to un-expected cheapness in our living expenses and more prompt of any rental money. Owing to this fact I think it will not be necessary to forward me any money this month.

Trusting to hear from you soon in answer to my last letter. Ever truly -

Yours sincerely
J. V. Miller.

Postscript -

We have not been able to cover as much ground per week as formerly owing to the bad weather which set in about the first of September. We have been compelled to remain in camp three or four full days on account of same. We are now located in McKim upon a belt of disite running eastward into Nelson & Falcon bridge and concerning which I wrote you formerly. If we continue along this belt to the end I think all idea of going to the west of Shabany must be abandoned for this fall. If you prefer to have us continue along the more northern belt, or that near the central or Cambrian formation kindly advise at your earliest convenience.

Handwriting

Send this to Sept
20-1902

Miller - Sudbury

You can raise the salary
of the 2 men to the amount
you state - I will have
magnetic assays made of all
your samples -

You can make the same
offer to the party that I
made last year as to
bonus, it to be paid when
mine or mines are prospected
by boring & are found workable
before you survey farm free ^{make some written}
offer to pay - Edison

Camp Edison

file

Sept. 27-'02

Mr. T. A. Edison -

Orange, N. J.

Dear Mr. Edison -

Since the last report of Sept. 18,
we have surveyed the following plots -

M. Linn -	Lot 3,	Con. VII	
"	" 1 x 2 x 3	" V	Southern portion
"	" 1 x 2	" IV	
"	" 1	" III	Northern half.
Melson -	" 12	" V	
"	" 11 x 12	" IV	

We have also made detail surveys of all the "finds" in these lots completing the work up to date.

The country in Blegard - Con. I is made up of outcrops of diorite and quartzite. To the south there are quite high and consist mostly of quartzite while to the north they consist mostly of diorite and are low, merging into a swamp. The diorite forms a belt which to the eastward joins with the belt on which is located the Cobie Mine, and to the west

(2)

trail runs a little south of this mine. There are numerous surface showings to the north which are highly mineralized but show little attraction.

The "fuels" in Lot 3 Con. I are scattered over most of the northern portion and I thought it well to apply for the N $\frac{1}{2}$, so that all should be included whether there was any good attraction or not, considering the fairly good surface showing and locality. A description of only characteristic "fuels" will be given.

The rock in McKinn consists of diorite and quartzite, the diorite being intersected by numerous small dykes of gabbro. The diorite is in a large pocket extending over several lots, and surrounded by quartzite. The diorite pocket forms a large land extending northwards which lies just south of the road from Sudbury to the Stobie Mine. The north side of this mountain is very abrupt while to the south it slopes off more or less gradually to Ramsay Lake. On the eastern side there is a small leakage leading to the NW in the form of a narrow belt. This belt we are following to the eastward.

(3)

Attraction # LXXBlizard - Lot 2 Con. ILine # 23 Rd. 128This is located on patented or leased ^{mining} land.Attraction # LXXBlizard - Lot 3 Con. ILine # 29 Rd. 188

This is situated on an outcrop of diorite, surrounded within a radius of 200 ft. by quartzite. The attraction is located precisely on the two contacts, where in a few small patches there is deep iron stain while all the diorite is partially stained. The diorite here, as well as throughout the northern portion of the lot contains a large proportion of horn blades while the quartzite has more the nature of gneiss with considerable mica.

Attraction # LXXIBlizard - Lot 3 Con. ILine # 31 Rd. 167

This is immediately situated in quartzite # stake and the base line being on this rock. It is just south of a narrow opening between two outcrops of quartzite. In this opening the rock is not exposed and as diorite appears a little west of this, it may be that a belt of diorite passes through this opening. If so the stake is close to the contact. There is some stain in the quartzite just west of the base line.

(4)

SW of # some 200 ft. is an outcrop of hornblende rock forming part of a belt extending to the west. Along the line of contacts of this and quartzite, which is to the north, there is considerable stain and mineralization. Very low attraction was obtained across this contact, which may be the explanation of that about # stake.

Attraction LXXXII

Blizard Lot 3 Corn I

Line # 33 Rd. 68

This is located on a large patch of quartzite, which is highly stained, but there is no diorite in the immediate vicinity. Some work has been done here and samples from a small pit show the rock to be gneiss and to contain a very small percent of mineral.

Looking to the fact that this is in quartzite and the patented ground no further description is necessary.

A sample, No. 256, was taken here for the purpose of determining the cause of the attraction.

Attraction # LXXXIII

Blizard Lot 3 Corn I

Line # 36 Rd. 214

This is located on a high outcrop of diorite with no quartzite in the immediate vicinity, the nearest being some 200 ft.

(3)
to the south. The rock about the survey is slightly stained and mineralized.

Attraction # LXXXIV

Blizard Lot 3 Cont.

Line 39-42 Rd. 224

This is located on the edge of a low outcrop sloping off to the N into a swamp. It is probably on the contact between large beds of diorite and quartzite as the outcrop is diorite and above the swamp some 200' is quartzite. 40 ft. to the east of here there is a small patch of stained quartzite. To the eastward of this no rock is exposed in the ground covered by the swamp. The diorite is slightly stained and fairly well mineralized.

The bare line runs parallel with the joining of outcrop and swamp, which is some 10 ft. to the north.

Attraction # LXXXV

Blizard - Lot 3 Cont.

Line #43 Rd. 179

This is also located on edge of swamp with an outcrop of diorite to the south. No quartzite could be found in the immediate vicinity, the only appearance being across the swamp some 300 ft. It is probably on the same contact as the previous "find".

The diorite is quite deeply stained especially about Stake #7 east of "O". It is also highly mineralized.

(6)

Attraction # LXXVI

Bleed Lot 3 Cont.

Line #47 Rd. #153

This was not found by the general survey as it is between trails, but upon examination of the country about the other "finds". It is located near edge of swamp on side of a bluff of diorite some 20' in height. There is a small patch, 10' square of deeply stained diorite, highly mineralized. It is probably on same contact as the previous two "finds". Ranger seems to think this quite good in spite of the low attraction found by the detail survey. The reading of 7 was on a part of the stained rock.

The remaining two "finds" in this lot #78 and #79 are similarly situated to one of the above.

The northern half of this lot is not marked painted nor labeled on the map, but it seems improbable that such showings as these and located as they are should be still untreated. There is no record of lease, patent nor application in Mr. Ryan's office and an application has been filed for the northern portion.

The finds, namely Nos. 80 and 81, were made in lot 2 Cont. II of this and

(7)

both are located on quartzite with no diorite in the vicinity. The samples were taken and further description is unnecessary.

Attraction # LXXXII

McKin Lot 1 Con. V

Line # 2 Rd. 3

This is located on NE point or vicinity of large mountain of diorite above described in the general remarks of the country. It is situated on two dips of gabbro running about E & W, and about 100 ft and 2 ft in width, the wider to the south. The strike is about at the middle of the former. The two are separated by a narrow belt of diorite. The quartzite is in the immediate vicinity, this rock being probably some 200' to the north and covered by low ground.

The gabbro is quite brownish in color and somewhat decomposed and probably contains magnetite.

Attraction # LXXXIII

McKin Lot 2 Con. V

Line # 38 & 39 Rd. 8

This is located on northern summit or brow of some high mountain. It is situated in diorite along a small, irregular rim of quartzite and gabbro, which is highly etched and mineralized. The rim has a NW direction. The contact between the main bodies of diorite

(8)
and quartzite is a considerable distance to
the north and at the base of the mountain.
At the western end of the base line, where
the largest attraction has found some rock
has been done.

Attraction # LXXXVI

McKin Lox 3 Cor. V

Line #14 Rd. 53

This is located at foot of mountain,
which is bordered by low land, where the
rock is almost entirely covered. It is
situated on quartzite with diorite some
400' to the south and only showing near
the top of the mountain. As the rock
is all quartzite no sample was taken.

Attraction # LXXXIX

McKin Lox 2 Cor. IV

Line 40 Rd. 130

This is located on northern side of a high
ridge of diorite, forming part of the large
mountain above mentioned. It is near
the base, which is bordered to the north
by rather low land where the rock is fully
exposed. It is immediately situated on
diorite with a patch of quartzite and fine
grained diorite about 1/2 mile.

Attraction # XC

McKin Lox 2 Cor. IV

Line #46-53 Rd. 257

This is located on a ridge forming part
of the same mountainous country as above
described. The rock consists of a belt, some

150 ft. in width, of gabbro bordered on both sides by dark colored quartzite which is quite porphyritic. The belt has a north-south direction and extends for several hundred feet. The base line for the detail survey follows about the middle of this belt and #0 stake is at about the center. The gabbro is the same rock as that described under # ~~LXXXII~~

Attraction # XCI

McKinn Loc 1 Con. III.

Line #9 Rd. 24

Located on a rocky ridge of diorite with no quartzite in the vicinity, but south of #0, some 50 ft. is a small patch of pure quartz about 15 ft. square. The rock in these places is quite deeply stained and some work has been done.

Since the general survey was made here I have learned that the surface rights have been applied for by a Frenchman, named de Charlemond, who holds considerable land and mining rights about Ramsay Lake and who wrote you in regard to them some time in July. He has not applied for the mining rights as yet, I understand.

Attraction # XCII

McKinn Loc 1 Con. III

Line #3 Rd. 86

(10)

This is located on south side of a fairly high ridge and near the bottom of a cliff some 70 ft. high and some 200 from the C.P.R. The rock consists of a patch of diorite surrounded by quartzite and conglomerate. The rock is stained and mineralized somewhat.

I am in receipt of your letter of recent date in regard to salary, bonus and farm land.

About four weeks remain of this season as I believe it would be unprofitable to keep the party here any later than the first of November. Already bad weather has hindered the work considerably. The remaining time will be occupied in following out this diorite belt to the eastward a few miles and then covering some cuts west of the Stokes Mine.

If you wish surveys to be made of different mining properties offered to you, I think this could be done after Nov. 1st and after having reduced the force to three or four men. The camp expensage could be easily moved and the expense of idle days would be greatly lessened.

As yet I have ¹¹¹¹heard from the Department in regard to only the first applications. Mr. Ryan was in Toronto some two weeks ago and inquired of officials of the Dept. concerning lawyers specializing in land applications etc. The firm of Denton, Dunn, & Russell Inc., National Trust Chambers, Toronto, was highly recommended, especially Mr. Shuttin.

Mr. Ryan seems to think this man would be of great service to you in pushing through applications for doubtful land. I as he has quite a "pull" with the Dept.

Yours sincerely,

J. S. Miller.

[ATTACHMENT]

Mr. Edison

Q. The question Mr. Miller wants
me to get an answer to is on next to the
last page J. P. Randolph

Bonus
offered by
Mr. Thomas A. Edison
1902

A bonus of $\$500 \frac{00}{100}$ will be given to the man finding the best workable mine, the same to be paid after the mine or mines are prospected by borings or shafts and are found workable or not.

If the mine is found by more than one man, the above stated amount will be divided equally among those finding it.

A bonus of $\$300 \frac{00}{100}$ will be given for the second best mine, under conditions similar to the above.

A bonus of $\$100 \frac{00}{100}$ will be given for the third best mine, under conditions similar to the above.

Signed - Thomas A. Edison
p. J. T. Miller.

Sept. 27-02
Sudbury, Ont.

Camp Edison

Sudbury, Oct. 14, 02

Mr. T. A. Edison,

Orange, N. J.

Dear Mr. Edison: —

Since the last report of Sept. 27th we have surveyed the following lots or portions —

Wilson —	Lots 6, 7, 8, 9 & 10	Con. VI	Entire —
"	11 & 12	Con. VII	5 1/2
"	9 & 10	" V	Entire —
"	6, 7 & 8	" V	To quartzite.
Blegard	" 7	" I	N 1/4
"	" 8	" I	East portion.
"	6, 7, 8 & 9	" II	Entire & portions
"	" 3	" III	Portions

In Nelson three "finds" were made. The rock formation here consists of a belt, varying in breadth from 1/2 to 1 1/2 miles wide, of diorite, of large crystallization and light green in color. The belt, having a direction close N of E, is bounded on N and S by quartzite. Within the belt, about in lots 6, 7 & 8 there is a large body of quartzite along

(2)

the line between Concession I and VI. The country is rough with hills except along the concession line where there is abundant thickly wooded.

Some farming claims were surveyed but the "stone pyramids" are all on Crown Land as far as known now.

Attitash # X C III

Section - Lot 10 Con. IV

Line #0-2 Rd. 240

This is shown on map of Lot 10 Con. IV as the readings were slightly over 20' bringing the line into the next lot S.

It is located at the south western extremities of two ridges running about SW. The ridges are made up of quartzite with occasional patches of diabase or gabbro. To stake of the detailed survey is on line #2 of general survey. About this there is gabbro with a patch of diabase some 75' to the NE. The main contact of diabase and quartzite is about 800' to the N.

About stake 20 m. of the rock formation is similar to that about #0.

There was very little stain in the rock but it was somewhat mineralized.

(3)

Attraction # XCIV

Melton - Lot 8, Con. V

Line #24 Rel. 75

This is located on slightly raised ground, bordered to the N by a swamp and to the S by ridges of rock mostly covered.

The rock covered by the swamp consists of disintegrated slightly uncovered but considerably stained. It is quite highly mineralized also. No outcrops in the immediate vicinity, the nearest being some 1000' distant.

Attraction # XCV

Melton - Lot 7 Con. V

Line #28 Rel. 80

This is also located on high ground ^{top of} a ridge, some 30' in height. To the north are low outcrops and then a swamp while to the south are high outcrops. The ridge consists of disintegrated considerably stained and mineralized.

The base line runs parallel with the foot of this ridge, the stakes being some 20' from it. The lines were run over the stained rock, giving negative readings at foot of ridge, positive on the summit and negative again

(4)

just beyond the summit.

The quartzite could be found in the vicinity. The character of the diorite varies somewhat from the country rock as that covered by the survey is dark in color and rather fine in crystalline structure, while the country rock is of much lighter green and more coarsely crystalline.

Applications were filed covering the three localities.

In Pleasant the rock formation consists of a belt of dark green diorite about one mile in width bounded to the N & S by granite, about as shown on the Government map. Except that there are patches of diorite and granite farther to the N than the line of contact shown. The rock is mostly covered to the west of Lot 7 Comm. III, considerable area being covered by swamps.

Over all the area of diorite readings have been obtained varying in amount from 5 to 50 and the nature of the rock and structure seems to be

(5)

the same as that in Grider and about the Vermillion River surveyed last year. The rock is not stained but more or less mineralized.

The survey made of Lot 3 Con. III is considerably broken out account of deep swamp and a creek. Only the northern portion was surveyed, but it is probable that the alluvium is the same over the entire lot.

Our next camp will be in the township of Morgan in a locality recommended by Demond, the surveyor. The rock is said to be considerably covered and a most likely place for our method of prospecting. We shall be there about two weeks and then break camp for the season.

At the suggestion of Mr. F. Cochran the hardware man of Anabury, I visited the mining location, called the # 7, owned by Cochran and M^o Vitter. They are situated in the township of Mackinac near Blue Lake, a little west of Kalamazoo Lake. Mr. Cochran wished me to see the showings and later asked me to write to you in

(6)

regard to same with the idea that you might wish to further examine and consider the property.

He dips his along the eastern corner of a rather narrow belt of diorite with quartzite to the east and west. It is laid along the western base of a high ridge with swamps and ponds to the west.

The rock has been uncovered about every 200' for about $\frac{1}{2}$ mile. Where this has been done there are good showings of gossan and quite solid ore. The gossan however is not continuous as it occupies in some places only a small part of the strapping.

Readings with the dip needle were taken in many places and across the exposed vein. Maximum attraction was often obtained over the deeply stained rock but judging from the readings across the creek the vein is quite narrow.

To the NW there is a claim belonging to Clergue which he has prospected with diamond drill and pits. Clergue has located his railroad near this but when it will be built is quite uncertain.

(7)

The ore is said to be of quite high grade and I am sending you a sample given me by Mr. Cochran.

If you wish to have the property further examined after the first of November kindly let me know at your earliest convenience.

One of the men has asked for a position at the Laboratory upon the completion of the work. He is a good man, taking interest in his work and is a fairly able fellow. He has had no technical education but has a mechanical turn of mind. If there is some position for him somewhere I shall have him reported in Orange.

Yours very truly -

J. S. Miller.

P.S. Have not heard from you as yet in regard to examining different properties upon completion of the general work.

J. S. M.

Endbury - Nov. 4, '02

Mr. Thomas A. Edison,
Orange, N. J.

Dear Mr. Edison: —

Since the last report of Oct. 14th we have run out the following lots —

Morgan -	Lot 5, Con. <u>III</u>	5 1/2
"	5, 6, 7, & 8, Con. <u>V</u>	Entire
"	9, " <u>V</u>	5 1/2
"	5, 6, " <u>IV</u>	Entire
"	7, 8 & 9, " <u>IV</u>	Entire

The general formation of this district is extremely hilly with steep and high bluffs ^{ridges}. Where the rock is considerably exposed in some places and in others covered with moss or gravel. The rock of the supposed ore belt consists mostly of diabase, being coarsely crystallized, containing considerable quartz and of a light green color. The adjoining rock to the south is a red hornblende granite bordered by the central slate formation. To the north there has been much disturbance as shown by the mixture of

(2)

diorite and granite, in veins or as conglomerate, covering a mile or more. The supposed belt of diorite or diabase passes along the contact line between II & V for the most part of Morgan. It was quite impossible to locate definitely the line of contact, as the survey lines run east to a distance which would positively insure crossing the contacts.

The District is reached by fairly good lumber road from Chelmsford, located on Main line of the C.P.R. Land is traversed by two medium sized streams and dotted with numerous small ponds and lakes.

Many attractions rock found in the disturbed area and two of considerable extent immediately along the diorite belt. We did not attempt to make detail surveys of all and only a few were surveyed and only the characteristic ones will be described.

Attraction #XCVI

Morgan Loc. 7 Con. V

Line #9-11 Rd. #10

This is located on summit and southward terminations of two small ridges, the one to the NW being narrow & sharp. To the north is country rough with hills of rock while to the south is low and swampy land. The

(3)

rock of the NW ridge consists of diorite, while that of the other is a conglomerate of diorite and granite. The former rock is slightly stained and well mineralized. The attraction is probably along the northern contact of the main belt of diabase running through the township.

The survey shows little attraction over the stained rock but more between the two ridges. The base line lies along the brow of the ridge to the SE.

Attractions No. XVII, XVIII, XIX, C, II, CV and CXIV.

There are located within the disturbed area where the rock is a mixture of diorite and granite either in small & waving seams or in large & small masses, as conglomerate. The rock is mostly exposed and shows no stain but slight mineralization. There being no characteristics distinguishing one from the other, no further description is necessary. Most of the other attractions unperforated are located in similar rock.

Attraction # XIX

Megan - Lot 7 Con. II

Lines # 18-20 Rd. 240

This is shown on map of Lot 7, Con. I.

It is located on summit of somewhat

(4)
rounding hills. The bed rock is mostly covered by alluvial deposits, but on the East side of the hill, about line #15, $\frac{1}{2}$ of $\frac{1}{2}$, the bed rock is exposed. To the south and east of the hill is low gravel beds while to the west and north are hills mostly covered with gravel.

The rock is the mixture of diorite and red hornblende granite. Characteristic to the region. But within the area surveyed, upon the outcrop above mentioned, and designated on the detail map by a small square, is a showing, 15' square, of stained rock having the appearance of a diorite and well mineralized. Also near $\frac{1}{2}$ stake there is highly stained and mineralized rock but there is some question as to whether it is float or not. However it is similar to the rock of the above mentioned showing. If this is in place it is probable that beneath the gravel there is a considerable showing. A separate sample was taken here beside a general sample of the area surveyed.

Attraction # 31

Morgan - lot 8, Cont.

Lines #28-34 Rd. 166

This is located on north side of rather high hill of rock consisting mostly of the mixture above mentioned but under -

65
rected in an E-W direction by a dyke,
15 ft. in width, of fine-grained diorite.
It extends from one side of the hill
to the other disappearing in low ground.

By the survey it is seen that the at-
traction extends practically only over the
dyke, the base line lying along the middle

Attraction # CVI

Morgan - Lot 9 Con. V

Line 8-15 Rd. 100

The formation here is similar to that
of find # CVI, consisting of a dyke in
the mixture of diorite and granite. Owing
to this similarity the survey was not con-
tinued to the limit of the attraction.
The dyke here is about 40' wide

Attraction # CVI

Morgan - Lot 5 Con. IV

Line 46 Rd. 34

This is located on southern side of a
ridge located in very rough country
and immediately elevated along the con-
tours of quartzite and red granite. The quartz-
ite is stained for a considerable area
and somewhat mineralized. Ranger com-
pares the formation with one to the NE
where zinc and lead were found. It
might be of interest to analyze the
sample for these metals.

(61)

Attraction # CVIIMorgan - Lot 5 Con. IVSection 31 Rd. 9.

The rock here is quartzite, somewhat mineralized but as no contact with chert is in vicinity it is probably of small value.

Attraction # CVIMorgan - Lot 6, Con. IVLine # 45 Rd. 182

This is located on north side and base of a high ridge forming the south bank of the Island River. Across this river there is a large area of a local gravel bed. It was rather difficult to determine the rock in the area surveyed, owing to its being covered almost entirely. However one small outcrop near the river's edge consisted of diorite, while on the brow of the hill the rock is red hornblende granite. It is quite probable therefore that the attraction is near the contact.

Some of the lines of the detail survey were limited by the river but later readings were taken across this and it was found that the attraction extended but little beyond that shown on the map.

Attractions # CXI & CXIIMorgan - Lot 7 Con. IV

There are of little value considering the attraction and the rock formation.

(71)

Attraction # 3XIIIMorgan - Loc 9, Con. IVLines # 3-9 Rd. 62

This is located on the south side of a long, high and steeply sloping ridge having an E+W direction. To the south is shorter high ridge while to the north the ridge slopes off more gradually, but probably, to Island River. The survey extends nearly from summit to base.

The rock consists of diabase, coarsely crystallized, light green in color and somewhat mineralized. On the ridge to the south some 400' from the base line there is red hornblende granite.

This completes the general rock of the region. On Friday last we broke camp and Saturday night the men returned to the station. I have retained Claude Gedyke to aid me in making detailed surveys of propositions offered to you.

Trusting that the work of this season was satisfactory to you, I remain

Yours truly,
J. V. Miller.

Baccharis, Lobelia, etc.

Toronto, Dec 8th., 1902 190

Mr. Thomas A. Edison,
Mento Park,

New Jersey.

Dear Sir-

I take the liberty of writing to you on behalf of Mr. Gordon, Civil Engineer of Sudbury, Ont. whom you may remember having met on the occasion of your visit to that district lately.

Mr. Gordon is the sole owner of a water power known as McPherson Falls situated on lot 11, concession 2 in the Township of Oronight quite near to some properties taken up by you and relatively close to all of them. Mr Gordon wishes to develop this property and thinks that possibly you might be interested in development. That is the reason of writing.

The natural fall of water at this place is 16 feet 6 inches. The building of a dam costing \$5,000 would give a head of 22 feet. According to the calculations of Mr Frankie, formerly engineer for Mr. Clargue, and now chief engineer of the Internation Nickel Co., and of Mr Rourke an engineer at Sudbury gives at the lowest stage of water in the year 2078 horse power assuming a head of 21-feet. The flow through the greater part of the year is many times greater than this. The Vermillion River is the out-let of a long string of large lakes. One of these lakes is 41 miles long and about 2-1/2 miles wide. This lake which lies in a country entirely unsettled, may be raised by a dam, costing a few hundred dollars, so as to store the water in Mr Gordon's belief, to permit the development of 6000 horse power continuously throughout the year.

12/10/02/WSM/L

Mr. John Miller.

Dear Sir:--

Confirming verbal request, please make as soon as possible a list of the properties taken up for the Edison Storage Battery Company and have it entered in a book, with full description, so we may have a full record, as several of the Storage Battery people have asked me for this information, and I want to give it to them, if possible, at the next Director's meeting.

Also arrange to do the same on the work of the Mining Exploration Company, so I may give the Directors the information.

We would like this as soon as possible, as we expect to have a meeting of the Exploration Company in the near future.

Yours very truly,

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President.

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Telephone Call 311 Orange.

Copy
Orange, N. J., Dec. 20th, 1902.

Mr. Charles McCrea,
Sudbury, Ont.

Dear Mr. McCrea:-

We have been informed by the Department in Toronto that the surface rights in a few of the lots in the Township of Elizabethtown which we applied for during the past summer are held by certain other parties. The Department also states that before we can obtain the Mineral rights it is necessary for Mr. Edison to make some agreements with these parties relative to damages, etc.

Mr. Edison desires to make such an agreement immediately and believing that it would be best to have a man in Sudbury do this for us I suggested you as agent. Mr. Edison gladly agreed and if you will undertake the work we shall be greatly obliged.

The proposition is this--We wish to have an agreement drawn up with the owners of the lots whereby Mr. Edison shall have the right to enter upon the lots for the purpose of prospecting and mining; to carry on mining operations anywhere on the lot; to have a perpetual right of way to any place where mining operations should be carried on; to be able to purchase land necessary for the erection of mining buildings and to carry on the mining work. Mr. Edison in return for such rights to pay the owner of the surface rights \$20.00 cash immediately for the privilege of prospecting, ^{and} mining, etc.; and

for every acre of land used for buildings, mines, roads, etc., to pay \$5.00 or the market value of the land at the time of sale per acre.

These are the maximum prices Mr. Edison would agree to at the present time and under the present circumstances. Of course he wishes you to make as good a proposition for him as possible.

Following is a list of the properties with the owners of same, given me by the Department:

Lot 7, Con. 1	N 1/2 of the N 1/2	owned by Joseph Malbouf
Lot 8, Con. 2	S 3/4	" " William Charette
Lot 9, Con. 2	S 1/2 E 1/2	" " Rev. T. Lussfer
	W 1/2	" " M. Brunet

I enclose copies of the letters from the Department in regard to these applications.

If you will undertake the work, kindly do so at once, informing me of your progress. Of course Mr. Edison will agree to any reasonable recompense for your work.

Hoping that I shall soon hear from you and wishing you and all a very merry Christmas, I remain,

Yours sincerely,

**Mining Exploration Company of New Jersey and Related Records
Thomas A. Edison Files - Correspondence (1903)**

This folder contains correspondence and other documents relating to nickel-bearing properties in the Sudbury district of Ontario. Most of the letters are to or from Edison, John V. Miller, or Walter S. Mallory. Many of the letters to Edison are field reports from John V. Miller. Other letters pertain to camp supplies or field instruments, including a magnetometer and a diamond drill. Also included are a few items concerning the financial affairs of the company; an undated list of stock owners; and an agreement between Edison and the Rat Portage Diamond Drill Co., Ltd. Some documents may be difficult to read because of spreading and smearing ink.

Approximately 50 percent of the documents have been selected. Most of the selected items contain Edison marginalia. The unselected material includes photographs.

Hiller

Show part about needle to Opdyke & have
him test it if ok. Let's get him to make
the other ones for Mr. Miller

Mr. Thomas A. Edison

George W. J.

Dear Mr. Edison:

Answered

Apr 4 1883

072

In a general way I can report

on the progress and condition of matters
here as follows: — Mr. Denton and I have
spent, with the exception of two or three
days, when I was in Sweden, the time looking
up the conditions of the several patents and
have succeeded in placing in very good
condition most of the important patents
& applications, with the exception of
the exception of the all important one
for "Can. II" of Pleyard and two or three
others.

We have succeeded in getting the Dep't's

[ON BACK OF PRECEDING PAGE]

What he said not take foot drill as
I went over to see Mr Gayday of school
Trust who is over our schoolhouse
head of the let us have two
Drills with expert men figures
no doubt but we will be changing us with
under our hands & men there
and the will do anything but
servants have 8 drills not in use
Regard the school & school
of the school & school
planned for the school
system and challenges
of the school was given to
option to extend the school
it is a \$50 down for the school

Letter stating that a lease will be issued
on covering the $14 \frac{1}{2}$ lot 7 Com. Th. of
Blyard and we have also arranged to
buy out the owner of the $5 \frac{1}{2}$ of this
lot for \$100.00. Upon the completion
of this deal we shall have the entire
lot.

Lot 8 Com. Th. of Blyard is in a very com-
plicated condition. Shorette, the claimant
of the lot in Sudbury, is trying to push
his claim for not only the surface rights
but now also for the minerals. It seems im-
possible that the Department could ab-
andon the mineral claim and there is con-
siderable irregularity in his surface claim.
Still the Department is giving him a chance.

[ON BACK OF PRECEDING PAGE]

of them if we found with
drill that there was no
value we could avail
ourselves of ^{the} option
pay the \$600.
Let it be the of the
of the lot in building is going to back
the claim for not only the surface but also
for the mineral. It seems in
possible that the department could ac-
tually be made in the surface claim
with the department in giving him a chance

and we are compelled to arraid cir-
cumstances, ^{& results.} Mr. Denton and I think
that the outcome of the affair ^{will be} that Char-
ette will obtain the surface rights
and we the mineral rights. He has
done some work upon the lot which
gives him a partial claim.

The other lots stand in good condition
and I think we can get through
the applications without much trouble.
I might state that it is a long and
hard job to get all the papers in
shape & to consult with the officials.

We have also put in an application
for the diamond drill for a month
hence, when the Bureau thinks we

shall be able to have it. It is necessary for us to deposit with the Government \$1000, then we obtain the drill, as a kind of guarantee, also to sign bonds, guaranteeing the safe return of ~~the drill~~ etc.

While in Swedenburg I went out to Ryeand to see the state of the country there. The snow is some 20" deep and little can be seen of the rock. Snow shoes are absolutely necessary. I believe we could make the detail survey, but I believe they will take considerable time. I would suggest that you have G. Dyke try the needle made by John Ott, & if satisfactory have him make two more. Then as soon as possible three of us can

Start in on the surveys.

I am expecting now to return to Sudbury
in two or three days to further bargain
with one or two people and also to
reexamine lot 7 Con. II of Blyard ^{to you}
so that I can more fully describe ^{the}
immediate country where the high at-
tractions were found. I shall be
back in Orange by the end of the
week.

It might be well for you to notify
me as soon as possible the maximum
price you would be willing to
pay in a cash settlement of the lot
8 Con. II of Blyard.

Hoping to hear from you soon, I remain
yours sincerely J. H. Miller.

Michel
Miller

DENTON, DUNN & BOULTBEE,
BARRISTERS, SOLICITORS &C.
NATIONAL TRUST CHAMBERS,
20 KING ST. E. TORONTO, CANADA.
FRANK DENTON, B.C. - READING, ENGLAND.
W. BOLTON BOULTBEE.

Feb. 3, 03.

F.C. Donald,
Edison Laboratory,
Orange, N. J.

Dear Sir:—

I have succeeded in obtaining the address
of the firm which makes the magnetometer, an
order for which at Carkey gave me some time
ago. I was unable to procure it in New York
so it is necessary for us to order from Sweden.
I enclose a letter which gives the name & address
of the firm also the description of the instrument.
Kindly order, with the approval of Mr. Eliot,
~~one~~ ^{one or two} of these instruments immediately, referring
to the letter of Demarest & Webster or related
in the enclosed letter. Have the instrument
or instruments sent to Swedenborg Street, by

DENTON, DUNN & BOULTBEE,
BARRISTERS, SOLICITORS &
NATIONAL TRUST CHANDLERS.
SIX KING ST. E. TORONTO, CANADA.
FRANK DENTON, M.C. - HENRY L. DUNN,
M. H. BOULTBEE.

Which we shall save about 30% duty.

Kindly attend to this at once.

Yours sincerely -
J. L. Miller.

J V Miller



Feb. 7, '03.

Mr. Thomas C. Edison,
Orange, N. J.

Dear Mr. Edison: —

According to my telegram of yesterday I have about succeeded in settling the claims against Lot 7 Con. II, Blyward, the papers are to be signed tomorrow.

We shall be able also to buy and the claim against Lot 7 Con. II, S 1/4, by the payment of \$100.00.

The proposition is being considered and ~~will~~ be accepted relative to S 1/2 Lot 9 Con. II, where by we are giving the right to carry on further prospecting for 30 cash and the right to buy



within 12 or 18 months such land as is found necessary for buildings etc. at the rate of 2.00 per acre.

It will be necessary therefore to have a deposit made in the Ontario Bank to cover these amounts. I am going to deposit a person at check to cover most of this amount but would like to have the Com-
missioner's Check sent on immediately. The amounts are as follows —

Lot 7 Con. II, Blyward S 1/4	\$100.00
" 8 " II " S 1/4	\$300.00
" 9 " II " S 1/2	\$0.00

I might add that there agreement has been made with the reservation of all timber to the present owners. They demand



a much higher price for the land
and timber.

Will you kindly see that this
money is sent ^{to the bank} ~~as~~ immediately.
Expect to be in charge by the
middle of this week.

Yours sincerely,
J. H. Miller

THOS. A. EDISON,
President.

Ex plo Co.

W. S. MALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Telephone Call 311 Orange.

Orange, N. J. 2/17/03/ESM/1

Thomas A. Edison, Esq.,

Edison Laboratory,

Orange, N.J.

Dear Sir:--

We beg herewith to hand you a statement taken from our Trial Balance of February first, 1903, showing expenditures for the season of 1902.

In the Sudbury district of Canada, we applied for 3260 acres of Nickel lands, and have leases or have notices that leases will be granted us on 1260 acres. Applications have not been settled on 1540 acres; applications contested on 160 acres and we have given up 320 acres.

In Connecticut we have purchased 23-2/3 acres of land about the so-called Johnson Mine, in the town ofitchfield, County ofitchfield, Conn.

For the season of 1903, it is our intention to continue the explorations and put in the field as soon as conditions permit, about twenty men, also to start diamond drilling to develop some of the property already leased.

We will call an assessment in the late Spring for the balance of your subscription, which will amount to \$400.

If you have any suggestions to offer, we will be glad to hear from you.

Yours very truly,

(Enc.)

W. S. Mallory

V.P.

[ENCLOSURE]

Mining Exploration Company of New Jersey,
Statement, February 1st, 1903.

RECEIPTS:

Cash		\$14,000.
Accounts Payable		
Howard W. Hayes	\$251.49	
Orange Chronicle Co.	9.25	
Western Union Telegraph Co.	.75	
		<u>\$ 261.49</u>
		\$14,261.49

DISBURSEMENTS.

Exploration-Connecticut	\$1,847.73	
" Sudbury	6,041.84	
Outfit	1,127.92	
General Expense	41.06	
Western Explorations	128.00	
Analyzing ores	163.86	
Leases	1,628.75	
Insurance	24.00	
Johnson Mine	175.00	
Legal Expenses	<u>383.74</u>	
		\$13,528.50
Accounts Receivable		
John V. Miller	\$ 148.00	
Edison Storage Battery Co.	<u>16.00</u>	
		166.00
Cash on Hand		<u>566.99</u>
		\$14,261.49

Saabury, Ont.

March 14-'03

Mr. J. F. Randolph
Orange, N. J.

Natby Gayley not quite
ready for Drill will notify
when ship

Dear Sir:—

Enclosed I send you the statement
from the Toronto Tanners' Union, Dundas,
& Hamilton which is correct.

I also enclose the letter from Mr. Gayley.
This refers to a drill Mr. Edison was re-
gathering for to be used in the next
work. I don't think Mr. Edison intended
to use it so soon as the last thing he
told me was that when we had made
the detail survey and he had seen the
maper & decided upon the location of
the drill he would arrange definitely with
Mr. Gayley.

It will be some time before we are

ready for this and I think it would be well
to write either Mr. Edison or the party
telling them that Mr. Edison was now
quite decided as to the location of the
drill. Perhaps Mr. Edison under the
circumstances would be willing to have
the drill stopped at once.

Probably it would be best to write Mr.
Edison immediately and get his opinion.
Hoping every thing is all done there
and that Knoxville is fast recom-
ing. I remain

Yours sincerely
J. O. Miller.

[ENCLOSURE]

To Miller
JAMES GAYLEY
71 BROADWAY
NEW YORK

*Answered
March 28/03*

March 10, 1903.

My dear sir:-

The following telegram has just been received from Mr. T. F. Cole,
President of our iron mining interests:

Jas. Gayley. Duluth, Minn. 9, 1903.
"We have secured Diamond Drill outfit and crew for work in the
Sudbury district for Mr. Edison. Please wire full instructions as to when and
where the drill and crew should be sent."

T. F. Cole.

Mr. Gayley is at present in the South for a short vacation, and
I would thank you to advise me concerning this telegram, so that I may write
or wire Mr. Cole.

Yours very truly,

J. W. Allen
Secretary.

*Mr. Edison has not seen this
letter.
Do you know about it?
I hope my
J. W. Allen*

To MR. THOMAS A. EDISON,

Orange, New Jersey.

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company

of New Jersey.

Sudbury, Ont. April 6, 1903.

Mr. T. A. Edison,

Orange, N. J.

Dear Mr. Edison:-

There is very little to report in connection with merely the survey in Eleazar as we have as yet not made sufficient progress to submit maps or opinions. The weather has been very bad and the moving over the ground and through the bush with snowshoes has been very slow and arduous. We are making some headway however and before many days will be able to submit the maps of a considerable area.

So far the survey has been carried on as follows:-
The base line was taken as nearly as possible through the centre of the area of attraction as shown on the main survey and has a direction of about NE. This therefore follows fairly closely the trend of the ridges of rock. The ground covered by the attraction is swampy and low ridges and hills somewhat covered by dirt and brush. The rock where exposed shows no sign of gossan and there are only small streaks of pyrites and pits caused by the decomposition of same. The rock is not pure diorite but seems to be mostly that with some characteristics of granite. Evidently it is diorite slowly changing into granite as explained by the geologist, in that there is no contact along the north side of the belt of diorite.

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,.....

Cross lines were run every ten feet and readings taken every five feet. However after covering considerable areas with these distances it was decided to run lines only every twenty feet, but still take five foot readings. The area of high attraction now is supposed to extend considerably farther than it seems to on the latest map, and as the attraction is quite regular I believe 20 ft. lines will be as satisfactory as 10 ft. lines. We have tried to run the lines as accurately as possible, cutting out cross lines at intervals, measured accurately. By means of these lines we have checked our paces and the map should be quite accurate.

I have been investigating the standing or condition in the Crown Lands Dep't of several lots extending along the main belt of diorite running through Blezard, McKim and Snider with the idea of getting options on these lots as we arranged previously. We have reports now on many lots and have approached some of the owners. It is the opinion of the lawyer here and it seems to be the idea of those from whom we have heard that we shall have to make a cash payment when an option for ten or twelve months. I should like to know therefore your idea and wishes whether or not you wish to make small cash payments on these lots with the options and also to what limit of price you are willing to go.

The lots, as you doubtless understand, are those to the west of the lots on Blezard which we have already, which follow along the northern side of the belt of diorite shown on the geological map of the district. Kindly inform me as soon as possible in regard to these matters, as one proposition is now awaiting an answer,

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company
of New Jersey.

Sudbury, Ont.,

namely for the E 1/2 of lot 12 Con. 1 of Blezard. You will notice that the diorite belt barely touches the SE corner of the lot. However the owner of the mineral rights alone of this E 1/2 wants \$50.00 down and \$500.00 in ten months or so for his interest.

Hoping that you had a pleasant trip and that you have not found things very bad at home, I remain,

J. C. Miller.

P.S. I am sending a sample of rock taken from an outcrop over which we obtained readings of about 30° in our detail survey.

[ATTACHMENT]

Write Miller he
better take options
on the Extensions
of the Blegans
at the prices he
names—

J. V. Miller
THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., April 6, 1903.

Mr. J. F. Randolph,

Engineer Laboratory,
Orange, N. J.

Dear Sir:

The following is an estimate of the expenses for the
Feb. March and April that are still to be paid:-

Salaries....

Guide	Feb. 3 days at \$2.00	\$6.00
	Mar. 31/2 " " 2.00	17.00
	Apr. 20 1/2 " " 5.00	102.50
	Apr. 30 " " 5.00	150.00
C. H. Opdyke	Mar. 22 " " 3.00	66.00
	Apr. 28 " " 3.00	78.00
J. V. Miller	Mar. 22 " " 169.00	
	Apr. " " 200.00	

Provisions 100.00

Sundries 200.00

Buying of two lots in Biezara 150.00

\$1238.50

Upon your returning the amount which I have paid out for the
Storage Battery Ubi according to my letter of today I shall have
on hand here about \$400.00 which will leave a balance necessary
to be sent me of about \$850.00. Will you kindly see that this
amount is sent me as soon as convenient. I have not as yet had a
chance to make up the account for March but will do so as soon as

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.

Respected Sir,

We are having pretty tough weather and work as the tramping over a foot of snow at some places and bare rock at others is terrible. There is in some places enough snow still for such shoes and in others not as we have a hard time to get over high places with the same outfit on. The work has not progressed as rapidly as I had expected owing to the bad weather and the slow headway made on snow shoes in the thick bush.

I trust things are in good shape at the lake, and Stewartville is fast recovering. Kindly give my regards to all especially Fred Ott and George Hetherington and tell the latter that I received the memo O.K. and will write him a letter in the near future.

Yours sincerely,

J. T. Miller.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Apr. 28, 1903.

Sudbury, Ont.,

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

Herewith I send you a general report on the work so far carried on in Blezard. I trust it will be quite satisfactory to you.

I have sent the maps in sections so as to preserve uniformity with the idea and request that you have blue prints made at once and pasted together as indicated on the maps. This will allow the original maps to be kept as they are and duplicates made later. Otherwise I am afraid that coloring these original maps will make the readings indistinct and later blue prints will be poor. Kindly have two sets of blue prints made and sent me as soon as possible. *MacLennan*

We have not as yet attempted to take any readings of intensity by means of the Swedish instruments which we received O.K. I have been hurrying to the utmost to finish the dip needle survey and send the report to you.

I shall, as soon as possible survey for intensity a section of the area just surveyed and send you the results.

Negotiations are being carried on for the lots along the belt of diorite in Blezard, McKim and Sniderand also we are negotiating for some lands in the township of MacLennan.

I enclose a list of Sudbury properties held by the Storage Battery Co. and the Exploration Co. showing the condition of each relative to leases and so forth.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont. _____

Handwritten: "Handwritten"
In order to make options on the several properties in Blackard etc.
I shall ^{need} have considerable money and I have written Mr. Mallory for some
to be applied to this work and also the general expenses. However con-
siderable more will be necessary and I think it would be well to have
a liberal amount sent me each month, as much as you think advisable.

As yet I have not heard anything concerning the diamond drill but
I suppose you will inform me definitely relative to it as soon as you
have decided on the location of it by the maps.

Yours sincerely,

J. V. Miller.

John

May 25. 1903

Rafu wants to come up & work for you his health is not good & he wants to be in the open air - He would be good man to work your ~~overlooked~~ needs & could act as a needle man this summer - I told him I would only allow him the pay others get \$2. per day The Nickel samples analyzed by Hathington showed 0.025 Copper & 0.045 Nickel

I became suspicious of this & sent samples to Aybworth he got ~~one~~ one & one tenth percent & got the actual metal, I have bounced Hathington as all his assays are Bunk hereafter send all samples direct to G W Aybworth E S Bat ~~to the lab~~
~~Mr. Brown~~ ~~Dr.~~
Edison Laboratory
Oranys N.Y.
Edison

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company
of New Jersey.

Sudbury, Ont., May 25, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Sir:-

I enclose herewith the map referred to in my report of even date. It is a map of the intensity and inclination survey of the ground where the highest attraction was obtained by the original detail survey and where we found showings of gossan and stain and ore.

The readings were taken with the Swedish magnetometers.

Yours sincerely,

*Mr. Edison
has seen this. Miller
and wrote Mr. Miller
J.F.R.*

REPORT OF MINING WORK IN SUDBURY DISTRICT. APRIL 28 TO MAY 25, 1903.

MR. T. A. EDISON,
ORANGE, N. J.

Dear Mr. Edison:-

The progress of the work since my last report of the 28th. inst. is as follows:-----

In Blezard Lot 8, Con. 2.

A log camp has been completed and is now being used. It is situated within the area covered by the detail survey and convenient to any work that might be carried on in this locality. A road about two miles in length, has been built from the old Cameron mine road to this log camp.

Immediately upon receipt of the blue prints and your instructions relative to the test pits, men were started on the work and pits sunk as nearly as possible according to your instructions. I am sorry to say that neither gossan nor stain, nor even rock fairly mineralized was exposed, except in the vicinity of the high attraction where we blasted in gossan, and from where we sent you samples. However this was not surprising as I hardly expected to find any showing.

In only one pit, namely on line #52, SW of Zero, and 135' NW of the base line, did we find mineralization to any extent. This however was peculiar in the fact that it was along a small seam of granitic rock in the diorite, the seam being only two or three inches in width. The

(2)

diorite itself contained scarcely any mineral. I am sending you a couple of pieces, Sample #309, to show you this peculiarity. It would hardly be worth analysing, I think.

Owing to the fact that there was practically no mineralization I have not sent any samples. If however you desire samples nevertheless kindly inform me. In several of the pits it will be necessary to blast to get samples of any amount.

The character of the rocks shown by the pits is as follows:- To the SW of Zero, the rock is mostly coarsely crystallized diorite which is considerably decomposed or weathered. It shows no mineralization however and could not be called gossan. This is the rock in all the pits except those immediately along the edge of the large swamp to the north. Here the rock is hard diorite, streaked with narrow seams of granitic rock. In one pit these streaks were mineralized as explained above.

To the NE of Zero the rock is quite granitic to the NW of the base line but changes to this coarsely crystalline and decomposed rock or diorite on the SE side.

In the vicinity of the high attraction where we found gossan, namely line #50 SW of Zero and SE of the base line, there is true gossan, highly stained rock and considerable mineralization. I have shown on the magnetic survey map of this vicinity, by the Swedish instruments, as explained below, where test pits have been sunk and the results obtained thereby. This is merely a further development of the first lot of pits sunk, a sketch of which has been sent you previously. I send

(8)

you also a sample taken from the small stripping marked C on this map which shows rock considerably mineralized. The sulphide however is considerably whiter than that from the other part of the show.

It seems to me that it will be impossible to locate the drill holes by samples but only by the magnetic readings. From the fact that we have found in some quantity pyrrhotite containing nickel within the area of attraction, it would be reasonable to expect that all the attraction is due to pyrrhotite. As there is no surface showing outside of the one locality, this pyrrhotite must be capped. Therefore I think we had better locate the first hole in the most likely spot, both as regard to the formation and the magnetic readings.

It is the general opinion and seemingly a reliable fact, that large bodies of ore are found in rather low, even swampy, ground. This is true of the Creighton, Big Lévack, and other properties. Our best readings are in a swamp and along the edge of same, namely between Zero line and #25 NE of Zero and on the NW side of the base line. You have indicated a drill hole in this area. I should judge this a most likely place and well worth trying. The hole should be perpendicular or dip slightly to the SW, running into the swamp. The drill could be stationed here on ground slightly raised above the swamp where water could be easily obtained.

As far as the surface showings are concerned there is only one locality to be considered. It would seem best here however to sink a shaft at least for a few feet, as we are quite sure of finding ore, as we have considerable goossan, attraction, etc. I have had this locality surveyed for intensity, taking the time of ten single hepts. This may

(4)

I am mailing you as well as a map showing the dip by the Swedish instruments, which show somewhat less attraction than the ordinary dip needles.

Will you kindly advise me therefore whether or not it will be satisfactory to locate the first hole as I have explained above and to sink a shaft in the vicinity of the show of gossan, namely about line #50 SW of Zero.

The two samples, namely #307 and #308, which were sent you and which were taken from the blasted out pit, may be somewhat misleading and give a wrong impression of the grade of the ore. In the first place sample #308 was sent not for analysis, as it was scarcely mineralized, but merely to show the nature of the rock surrounding the highly mineralized rock and therefore should not be considered as a sample to judge the value of the ore. In the second place, sample #307, was far from being solid ore and as I understand, ore on the surface generally carries more copper than that below the surface, pure ore at a depth of a few feet, in all likelihood, will be considerably different in the proportion of copper and nickel.

In Falconbridge Lots II and I2, Con. 4.

The work here consisted in sinking a shaft in the gravel. One shaft was started, but owing to the caving in of the sides, was abandoned at a depth of about twelve feet. Another was started and sunk about fifteen feet when the sides began to cave in. Timbering was finally resorted to and the shaft was sunk to a depth of some 30 ft. in gravel, hard sand, loose sand, and again hard sand. At this depth there was no indication of stain, but there was a difference of some eight degrees in the dip by the dip needle.

(5)

A survey was made by means of the Swedish instruments, of the intensity in the vicinity of the attraction, but this showed only slight variation, a maximum of about two seconds. I will send you a map of this survey shortly.

Owing to instructions received from Mr. Mallory, the work here was stopped last Friday and the men discharged.

I am sorry that this was necessary as I believe this is a very likely place owing to its location, and would be an excellent place to test the practicability of the needle and give us very interesting and valuable information relative to elevation tests, possibility of detecting ore at considerable depth, etc.

The shaft was covered over and protected as well as possible so that the work can be resumed at any time with little trouble.

I regret also that the Storage Battery Co. is not willing to have development work done on their properties as I had expected to make some detailed surveys of the attraction in lots 3 and 4 Con. 5 of Snider. This locality, owing to its nearness to the Creighton and Copper Cliff Mines, might give us a better grade of ore than the Bleazard finds. It would be well to call your attention to the fact according to the mining laws, Section 44, pg. 21 Mines Act, ^{that} a certain amount of development work on the claims is necessary in order to hold the properties. This amounts to \$1.00 per acre of the claim for the first two years. I judge this is not absolutely necessary unless other parties desire to take up the land and would make a point of no development work done.

(6)

In regard to the prospecting party this summer I am somewhat surprised that you have reached a decision before we have developed any of the properties already found. It would seem to me that it would be best to develop the properties and prove up the practicability of this method of prospecting for nickel. Also to obtain some definite information to guide us in future prospecting, taking up land, etc. It will doubtless be rather late in the fall before we can be sure of any of the finds, too late for any other parties to start out. Having proven the practicability of the dip needle here we could put a party in the field early next spring if desired.

However I am corresponding and engaging men for the survey party and expect to examine likely ground for the work. I think the best locality would be at the SW end of the District, near the Sultana Mine. You will remember, however, that last fall this region was not open to prospectors owing to a concession to Clergue, at least that is the supposed cause. I am writing the lawyers in Toronto to investigate the matter and if this ruling is still in force, to see if it cannot be changed or gotten around in some way.

We might also try the North Range, but the northern contact, that corresponding to the contact on the southern range, on which are located practically all the known mines, is almost entirely taken up and the only ground remaining would be the interior and southern side of the belt of diorite.

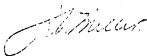
If you have any particular locality which you desire surveyed, will you kindly inform me at once, as I want to lay out the work as much as possible before the men arrive.

(7)

I might add that there are several smaller bodies of diorite south of the main lead and that on which we have practically done all our work. However it seems to be the general opinion that these are not very likely bodies, the geologists claiming that most of them are not the true nickel bearing rock or specie of diorite.

Will it be satisfactory to you to have development work done on some of the other properties taken up last year or do you wish to confine the operations to the lot in Blezard? I think a likely place would be in lot I Con. 2 of Blezard, also one or two of the places in Carson. We could sink test pits to show up any goosau or stain that might be covered. I put this question now as I would rather not start more work and then have to stop it and discharge the men.

Respectfully submitted May 25, 1903.



[illegible]

I am so happy to hear —
 as far as getting on trip. etc
 that is all right.
 I am sure you will find
 just what you need.
 This morning I met
 both Mr. Gaylor & Frank
 strongly advised it, so
 take steps to come down
 and arrange for the
 new — I think the

3.
The distance from you is the least
possible, the distance across
the River is the right distance
the river from our deposits
at the Vermilion is the
largest mine the Canadian
Copper Co. own - this is
good indication for us.
Probably the Clergue
thing can be got off -
If you think it will be

of great value to sink
the Falconbridge shaft 40
ahead 9.20-50 - What
we want to know
is the result of diamond
drilling over some large
attraction areas - once
we get a clue we
shall know what to
do - I think Rafus
will be considerable

assurances do you in
of quarry out ~~creating~~
of he can be depended
up = 4 or 5 men on
Ingle with a foramen
would be all right
afterwards they would go to Vermilion
at the point
Now and sending any
samples of the ~~the~~
pyrites —

You might spend a little
money on sinking a shaft
on goosau ^{at the point} ~~at the point~~ ^{at the point} ~~at the point~~

~~The diamond drill is
really the only thing that
will tell us what is in
the rock.~~

You might run across a big
goosau — but in any event
the drill is the only thing
that will give us great
disappointment or encouragement

Σ

THOMAS F. COLE,
PRESIDENT.

OLIVER IRON MINING COMPANY,
GENERAL OFFICES, EXCHANGE BUILDING.

DULUTH, MINN.

June 11, 1908.

EXPLORATIONS - SUDBURY DISTRICT.

Mr. W. S. Mallory, Vice Pres.,
Orange, N. J.

Dear Sir:-

I have your favor of 8th and beg to advise you that our General Superintendent on Marquette Range, under date of June 9th, sent to your Mr. Miller complete itemized statements covering diamond drill and all equipment and supplies forwarded and the rate of wages to be paid the men, so that he has full information on this subject.

You must arrange to pay all labor, railroad fares, freights and all expenses of whatever nature. This Company has not been authorized to advance any money for your account. We will simply render bill for rental of diamond drill and equipment, as well as repairs, as per agreement already entered into. Of course we shall expect prompt payment for the carbon and supplies we shipped you.

Yours truly,


President.

[ATTACHMENT]

Statement of Drilling Outfit & Equipment Shipped to Sudbury, Ontario,

By Oliver Iron Mining Company,

For Account of Mining Exploration Company of New Jersey,

Same in Car No. 3925.

1	Diamond Drill and Outfit	Valuation	1911.05
1	Mounted Boiler	"	400.00
1	Pump	"	50.00
			<hr/>
			\$2371.05

This invoice is true and correct and where there is a difference between any of the prices shown therein and the ordinary credit prices at which the same articles are now sold bona fide by the exporter in like quantity and condition at this place for consumption in this country, the latter prices are shown on the margin or elsewhere on such invoice.

*James
Attorney*
Oliver Iron Mining Company,

M. Johnston
.....
General Superintendent.

Balmoral Hotel...

MORIN & CO., PROPRIETORS

Mr. E. C. 288

Inclbury, Ont. July 1, 1903

Matty

My dear Mr. E. C. -

Just a note to let you know about the diamond drill. Claude Godyke met me in town and reports that as yet no ore has been struck. They were down 255'. He says that they struck a small seam, about 8 or 9' in thickness, of granite and a depth of about 200'.

The rock has a few specks of mineral.

I shall telegraph you as soon as we make a strike so you for the present the following code.

Balmoral Hotel...

MORIN & CO., PROPRIETORS

Inclbury, Ont. 190

Matty

At depth of
Solid ore
Mixed ore
Feet
100 feet
200 "
300 "
400 "

= Orange
= Grey
= Mixed
= Laboratory
= Single
= Double
= Treble
= Quadruple

Telegram will be like this

Orange single 54 Grey 5 Laboratory

Which means

At depth of 154 feet struck solid ore 5 thick.

I believe this will be clear enough.

I will send you a formal letter in a day or so.

Yours sincerely
J. L. Miller.

REPORT OF MINING WORK IN SUDBURY DISTRICT. JULY 4, 1908.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

Drilling in Hole #1 has been stopped at an inclined depth of 300'. It gave no sign of ore, beyond slight mineralization scattered quite uniformly throughout the hole. The rock was all diorite with two exceptions- namely at a depth of 191' there is about 10' of rock considerably more granitic than the rest of the core, containing considerable feldspar, etc.. Also at a depth of 255' there is a small seam or layer of mica schist streaked with quartz and feldspar. The rest of the core, as mentioned above, is practically all diorite, but this is in a few places mixed with a little feldspar.

The total inclined depth of the hole, at an angle of 60 degrees, is 300' 2", including 11' 9" sunk through the surface covering of clay, etc. The total length of the core is about 272' giving a loss of about five percent.

A rough estimate of the cost of drilling the hole is as follows:-
Time of erection after drill was on the ground 5 days.
Time of actual drilling by 10 hr. shifts 26 shifts.
Average depth drilled per shift 11.5'
Labor per foot

Including erection but not hauling in drill	\$ 0.87
Diamonds per foot	<u>2.50</u>
Total cost per foot	\$3.37

Mellon
Note: all the saw
about diamonds by
we better send them
our two bits of diamonds
by express during
one afternoon
Edison

(2)

Of course this is not accurate as we have no way to measure the loss of diamonds and I have not as yet been able to figure out the cost of feeding the men. However in the labor item I have figured the board in at fifty cents a day per man.

In an examination of the core relative to the effect of holding small pieces, about two inches in length, as near the end of the dip needle as possible, I found that nearly every piece effected it to some extent, some quite a little. I took small samples from each core box, containing 48', crushed the sample from each box separately and tried a magnetic separation by a small horseshoe magnet. I found some magnetic material in each but it was a very small percent. However one piece from the box containing the core at a depth of about 100ft. effected the needle considerably and was separately crushed and separated. The magnetic portion, as judged by eye, was $1 \frac{1}{2}$ or 2% of the total. This magnetic portion did not appear to be pyrrhotite, as it was quite black. I tried to get a similar piece from the box later but could not locate it.

In order to show you the nature of the rock, that you may try the magnetic effect of the pieces of core on a dip needle, etc, I am sending you samples of the core taken about every six feet. Each sample is marked with the inclined depth. The vertical depth is .866 times this. Towards the lower end of the hole you will notice that a little larger jump than six feet is made in one or two places between the samples. This is owing to the fact that at these places there were exceptionally long pieces of core, 7' or more, and as the rock was practically the same, samples here were not taken, so that the core

(5)

could be preserved.

The fact that these small pieces of cores effect the needle, puts a rather bad light on the subject. It hardly seems probable that the very small specks of pyrrhotite scattered through the rock could cause this, and as the magnetic portion of the samples roughly separated has little appearance of pyrrhotite, it would seem that magnetite must be present in the rock. Samples of diorite were taken from the surface near the Little Stobie and Mount Nickel Mines. They had no effect on the needle. Other samples were taken of diorite outcrops within the area of the detail survey, in localities where there was no attraction over a small area, and where there was considerable attraction. These samples did effect the needle to a more or less extent.

The drill is now being moved to a point 183' south (about) from hole #1, in the line of this hole. It will be inclined at an angle of five degrees ^{to the vertical} so as to insure the direction of the hole. At a vertical depth of 200' it will be 50' from hole #1. This hole therefore will be, relative to the belt of highest attraction or heavy yellow, on the side where the attraction drops off the more gradually, namely on the southern side.

The shaft upon which the men were working when I left here was sunk to a depth of about ten ft. and stopped as all stain and gossan ended and the rock was merely diorite, somewhat mineralized. All mining work on shafts stripping etc. has therefore been stopped in this locality.

Owing to the uncertainty of the value of this character of ground I have determined to send the needle men to the Township of Morgan

(4)

to survey the remaining likely ground there, instead of making a detail survey in Snider. Should we desire to make the survey later we can easily get the men down and make it in a short time.

As all shaft work has been stopped in Bickard and as I have two good men for this class of work whom I would like to hold I have decided to resume work on the shaft in Falconbridge.

The drill setter informs me that the diamonds sent with the drill are wearing quite rapidly. He seems to think that they are quite soft or brittle and not very good. He advises that we procure more at once and I think it might be better to get them in New York and have some one pick them out carefully. The setter says they should not be less than three carats each. We will need twelve or fifteen I suppose. As nearly as we can judge we have used about fourteen carats in hole #1 in wear and breakage into too small pieces for use in the bits. The price paid for these carbons was \$52.50 per carat.

I have just received a letter from Mr. Denton the lawyer in Toronto. He states that there is some chance of the Commissioner of Crown Lands giving us permission to work in the townships of Trill etc. which have been held by Clergue. I will write him to push the matter as much as possible.

Yours sincerely,



(5)

P.S.

Three detail surveys of localities of high attraction in the lots 7 and 8. Oppression 2 of Biazard along the same general line as the attraction on which the drill is now working have been finished and I send you the maps. They are all inked in and ready to be blueprinted.

Some test pits were sunk where the highest attraction was obtained but there was no sign of stain or gossam.

The nature of the ground is about the same as about the drill. The line of the swamps, low ground and ground about ten feet or more above the swamp level are indicated by dotted lines and the intervening space marked.

J. V. M.

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. T. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sedbury, Ont., July 8, 1908.

Mr. T. A. Edison,
Orange, N. J.

Dear Sir:-

Following is the code for the results of the diamond drilling:

At depth of.....

Orange.

Solid ore.....

Essex.

Mixed ore.....

Morris.

Fast.....

Laboratory.

100 ft.....

Single.

200 ft.....

Double.

300 ft.....

Treble.

etc.

Drill hole #1

One at beginning of
telegram.

Drill hole #2

Two " "

etc.

A telegram will be like this:-

Two Orange single 54 Essex 5 Laboratory.

Meaning.

Drill hole #2 at a depth of 154 feet struck solid ore. 5 feet thick.

I send by this mail the detail surveys of the attractions in lots
7 and 9 in the second concession of the township of Blizard as follows:

Attraction Lines 27 to 35, Rd. 75.

" " 0 " 9 " 90
" " 14 " 20 " 90

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

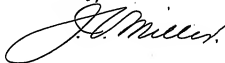
Mining Exploration Company of New Jersey.

Sudbury, Ont.,

Drill hole number 2 was down about 25' last evening but as yet there was no showing of ore. Claude Opayke is stationed at the drill to watch the work and especially to watch the drawing of the core.

The needle men were sent yesterday to the township of Morgan. $\frac{1}{2}$ 50
up there this noon.

Yours sincerely,



Answered

REPORT OF THE MINING WORK IN THE SUDBURY DISTRICT. JULY 18, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

Hole #2 is now down to a depth of 200' and as yet no ore has been found. The rock is practically the same as in hole #1 and small pieces of ore affect the needle to a more or less extent. We shall continue this hole to a depth of 300' corresponding to hole #1 and then move either southward, in the line of holes #1 and 2, 100' or eastward some 100' in the line of the belt of highest attraction.

Have you examined the samples of ore I sent you from hole #1 and if so what results have you obtained and what opinion have you reached? I suppose you desire to try one more hole on this attraction anyway. If nothing is found in the third hole shall we return to hole #1 or #2 and sink deeper?

The shaft in Falconbridge is now at a depth of 45' where water and quick sand has been found, according to the report of the foreman who came in last evening. We shall try tomorrow to drive a pipe down to determine how much farther we would have to sink to bed rock. If it is impracticable to sink further I think it would be advisable to stop work for the present until we could move the drill to the locality. To my mind this is one of the best properties we have.

As yet we have been unable to obtain an interview with the Commissioner of Crown Lands in regard to the townships of Trill etc., but hope to next week. Mr. Denton thinks that the Government will allow

(2)

us to enter these townships if there is anyway they can get around the agreement with Olergue, i. e. if the matter has not gone to far with the Olergue syndicate.

I have had an interview with the manager of the diamond drilling contractors concerning whom I spoke to you. He thinks that they can take contracts for us at about \$3.50 per foot but before making any definite price he would of course have to see the properties. They have a drill at the Gertrude Mine which will be free towards the end of August. This would be quite convenient for our properties in Lot 6 Con. 6 of Graham and Lot 5, Con. 1 of Smider. The firm seem to be very reliable and do satisfactory work.

I received the two bits sent from the Laboratory and ten of the best stones are in Elezard and are being used on one bit. The stones are all pretty small however.

The stones we received from the Oliver Mining Co. are wearing very fast and the setter seems to think that they were a poor lot and that we were stuck, so to speak. I mention this with the idea that you may wish to bring up the matter with the Iron Co. and perhaps get some rebate on them. As these stones are wearing rapidly the price of drilling per foot for the two holes will be more than the figure I gave you in my last report.

I hope that I shall soon hear from you in regard to the future drilling and that you will soon be coming up here to look over the different properties.

Yours sincerely,

J. L. Miller

[ATTACHMENT]

Mallory ^{Am I not} ^{in the} ^{right} ^{way}

Write Gayley & ask him
if he can get from ~~Edison~~
International Electrical Co. ³ ¹
like the following — ^{pages}

~~Sept~~ To the Manager of
The Canadian Copper Co
Sudbury Ontario

Please permit Mr Edison
Engineer Mr John V Miller
to go on the surface of the
Copper mine to test his magnetic
needles & cables —


THE RUSSELL.
OTTAWA.
F. X. ST. JACQUES, PROPRIETOR.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:—

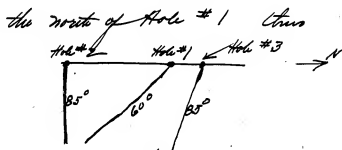
I have been in Toronto and came here this morning in relation to the townships of Trill, Drury etc. which have been under the control of the Clergy syndicate. We had quite a satisfactory interview with the Premier and I think we shall be allowed to go into the townships soon or later. There is chance however that it will take con-


THE RUSSELL.
OTTAWA.
F. X. ST. JACQUES, PROPRIETOR.

siderable time. I will in the meantime make a preliminary survey of the district to locate the probable belts of diorite.

As regards to the drill I would say that the third hole has been started but not when I told you in my letter. In comparing the rock of holes #1 & #2 we found a layer of shales rock in both & plotting these we found there was a dip to the NW. On this account I have placed Hole #3 20' to

THE RUSSELL.
OTTAWA.
F. X. St. Jacques, Propr.



this ought to end any rain of ore. Unless I hear to the contrary then I shall put down this hole to a depth of 500' according to your telegram which I have just received. I trust this will be satisfactory.

Evidently you don't think the slight effect on a dip needle

THE RUSSELL.
OTTAWA.
F. X. St. Jacques, Propr.

came by the piece of ore amounts to much. I can hardly agree with you, but I hope I am wrong.

Hoping you will soon come up. I remain

Yours sincerely -
J. W. Miller.

REPORT OF MINING WORK IN THE SUDBURY DISTRICT. JULY 29, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

I am in receipt of your letter of the 24th. inst. and am glad to hear of the good results of your tests of the core. It certainly puts a different light upon the subject.

We had already tried samples of diorite under low or no attraction within the area surveyed and found that there was some effect on the needle, as explained in my report of July 4.

On an accompanying map I have endeavored to give you as much information as possible relative to the lay out of the drill holes, their depths and the character of the rock encountered. All the lines are measured and plotted to scale. You will see that the ruling of the paper does not quite correspond to actual measurement.

The tops of the holes are practically on the same level, as far as the map is concerned. Considering the top of hole #1 as 0 level, hole #2 is 11" and hole #3 5" above this level.

At the top of the sheet are the readings obtained along the line, (marked X on the two pages) of the drill holes, with the colors corresponding to the areas of the detail survey you colored. Also the boundaries of the swamps and raised ground are indicated on the top line. (Swamp) (High ground) {.....

I am sending you samples of the slugs taken alternate five feet from holes #2 and #3. These are quartered down samples of the washings for

(2)

five feet, crushed by the diamonds, and should be very accurate samples of the rock. Also there is a sample of the core from hole #1, at a depth of 49' 3", and a sample of the core from hole #2, at a depth of 51' 9".

Regarding the character of the rock in the different holes....

Hole #1. Total depth (inclined) 300' 2".

The rock is practically all diorite with the exception of a band of shist at a depth of 253'. However in some places there is a larger percentage of quartz or feldspar, giving the rock a somewhat different appearance. Still I think it might all be classed as diorite. At a depth of 116' to 167' the diorite is of much larger crystallization.

As you have samples of the core no further description is necessary.

Hole #2. Total depth (inclined) 259'.

The rock here is mostly all diorite with the exception of the band of shistose rock similar to that found in hole #1. The shist here is at a depth of 213'-220' 2". Between 29' 9" and 32' 3" the diorite is of large crystallization. Between 11' and 15' and 220' to the bottom of the hole the rock contains a little larger percentage of feldspar and quartz. This percentage of feldspar and quartz is less than in hole #1 and the amount of the core having this characteristic is less.

Hole #3. Total depth on morning of July 29, 77' (inclined)

The rock here for the most part contains considerable feldspar or quartz, giving the rock a more granitic appearance. This is of large

(3)

and small crystallization. The sample of the core from this hole will give you an idea of the nature of the rock, in which the feldspar or quartz is more prominent. *From 54' 7" to bottom, the rock is diorite.*

In making the cross section of the drill holes with the nature of the rock indicated, only one distinct vein is evident, that being the schistose rock. This has an apparent dip towards the north but seems to be pinching out towards the south. On the supposition that this vein indicates the dip of all the rock and ore I located hole #3 as it is. It was the intention to sink this hole to the vein of schist and if the dip of the vein continued the same, as is likely, that is towards the north, to continue the hole but if not to draw up and move to the south of hole #2.

Relative to the attraction I considered that the ore mass might be dipping to the north but still have its pole south of the maximum attraction, namely 40. This pole might be rather large in extent, giving us a gradual increase in attraction as we cross it from south to north, up to the maximum, and then a rapid decrease. In such a case and considering the dip of the schist, hole #3 ought to cut the ore mass about at right angles.

Unless the location etc. of this third hole is not satisfactory to you and I hear from you to that effect I shall continue it as planned. I will let you know either by telegraph or letter at what depth we encounter the schist.

I will send you an itemized account of the cost of the work of drilling in a few days.

Yours sincerely,

J. M. Miller

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., August 4, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Sir:-

Hole #3 is now down 190' and we have been drilling in granite since the depth of 54' 7".

We have not been able to get any definite decision from the Government relative to the townships of Trill and so forth and as the season is fast drawing to a close I would like your advice relative to the matter. The lawyer in Toronto seems to think we run a pretty fair show of getting into the townships. We might run the risk. Are you willing for us to go down there and take the chances of having our applications accepted by the Government? There are some applications in already for some of the lots along the belt but most of them are quite old and according to the Crown Land officials are of little account. We might have to buy up some of the claims but I think we shall have no trouble in this regard. Kindly advise me at your earliest convenience.

Yours truly,

J. F. Randolph

Thank you for letter survey in the
Chapman territory & take chances

8

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey

Sudbury, Ont., August 28, 1903

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

Hole #3 is now down 271' At a depth of 265' we struck the same shistose rock as in the other holes and it here has a thickness of about five feet. Following this there is diorite again. As I wrote you in my former letter I shall continue this hole therefore unless I hear from you to the contrary. Upwe is coming in in the morning and he may bring some better news if so I shall write again tomorrow. Relative to the townships of Trill etc. I have just received word from the lawyers in Toronto that the Government have decided against us and therefore we shall not be able to put in any applications. Mr. Denton states that he will try again in the fall but I don't believe we stand any show of getting their consent as the Commissioner of Crown Lands was very positive in his opinion that the Government could not rescind their first agreement, i. e. their concession to the Clergue people. I have therefore notified some of the men that the expedition for this summer has been abandoned at least for the present. I have just received tonight your letter relative to these townships to the effect that we should take the chances of the government giving its consent to our going into these localities. The letter from the lawyer would no doubt change your opinion and therefore I shall notify the remainder of the men that the party has been abandoned.

Yours sincerely,

J. P. Miller

*Mr Edison says no
answer Aug 17/1903
10:15 AM*

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company

of New Jersey.

Sacbury, Ont. August 11, 1903.

Mr. T. A. EDISON,
Orange, N. J.

Dear Sir:-

Herewith I send you a report of the cost of sinking holes #1 and #2 as you requested. This is practically complete as far as the drill itself is concerned but I have not included the cost of the supervisor, i. e. Claude Opéke. In addition I might add that this does not include the purchase of the fire wood as we have as yet not paid for the wood that we have used. In other places there is a chance that we might have to buy the wood and also have to haul the water which of course would increase the cost per foot.

As I understand the contractors, they will sink the holes at about \$3.50 per foot but as I told you they will not give us any definite price until they see the localities.

You will notice that the cost of the diamonds is the principal item and has been reduced in the second hole considerably. In the hole we are now drilling the diamonds have cost us so far about \$1.63 per foot. The stones from the Laboratory are much better than those sent by the Iron Co. but still the ~~water~~ ^{setter} tells me that they are too small for good work and he thinks that if he had first class stones he could bring down the cost of the diamonds to considerably under \$1.00. In consideration of this state of affairs I think it would be well to have some new stones sent up here immediately on approval and have our setter make a selection and return the poor ones. We are now using all

Wpton

Close attend

E. J. Hallory

W. S. Hallory

*See Simon Bros
or other dealers in
diamonds & get prices
also a few dollars
worth of fire wood
for our drills*

W. S. Hallory

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

(2)

the carbons we have as those from the Laboratory are so small that it is necessary to at least set eight stones in a bit and sometimes more, and as we find it better to have three bits working all the stones are in use. We shall need some new stones under all conditions.

The fire wood is now being cut by contract which will reduce our expenses a little.

Hole #3 was down 290' last evening and the rock is mostly all diorite.

Yours sincerely,

J. F. Randolph

Nickel - News

I try that I have spent some
time, money in looking up nickel
mines in the West. that I am through
about want any more. Every ~~these~~ ^{regulation}
made even by Delaware ~~governor~~
Sho. C. Edison turned out wrong - St. Joseph, Mo. Aug. 11, 1903.

Answered
Aug. 16/03

New York. N. Y.

Dear Sir:

I have a Copper & Nickel property located in
Colorado, to which I would like to call your attention. It
comprises two claims each 300X1500 ft.; - shaft 100 ft.; drift at
bottom of shaft 25 ft.; - tunnel 150 ft.; vein 8 to 9 ft.; producing
Silver 20 oz. - Copper 20% - Nickel 15 to 25% - Located 25 miles
from Canon City, Colorado; - easily accessible to R. R. (2 1/2 miles
distant) at foot of mountain. Value of all ores \$7600 per ton
at present commercial rates. Walls well defined & perfect the
entire depth of shaft & drift contact granite. Lead & Zephyr.

Should you desire to investigate the matter, will be
pleased to give all detailed information necessary; & invite special
rights through inspection of the property. - myself & partner own
it equally & will dispose of part or all of our holdings therein if
desired.

Would be pleased to have your earnest
consideration of the matter, as I believe it well worthy such
consideration.

Yours respec
F. R. Hanna

J. V. Miller

REPORT OF MINING WORK IN THE SUDBURY DISTRICT. AUGUST 14, 1905.

Mr. T. A. Edison,
Orange, N. J.

Dear Sir:-

Township of Morgan.

The work here has progressed rather slowly owing to different circumstances, such as rain, laying up of one of the men by a bad cut, and the call home of two of the men by the death of their mother.

However the lots and portions of lots surveyed by running 100' lines and 20' readings are as follows...

All of lots II and I2, Con. 4.

Southern portions of lots II and I2, Con. 5.

Western portion of lots IO, Con. 4 and 5.

Several localities of attraction were found, three quite large, the remainder rather small.

The rock in this district is somewhat different than that along the belt of diorite running through Blezard, Snider, Creighton, etc., but I have been advised by the provincial geologists that the rock is the nickel bearing norite. We have followed somewhat the line of contact as found by the geologists but have run considerably farther north than this line to make sure of covering the contact.

In the southern portion of the area surveyed the rock contains considerable pinkish feldspar and it has a general pinkish color. In the central portion, or that just south of the line of contact of the geol-

U. C. C. L.
file Murray Spillman

(2)

ogists, the color of the rock is a light green but the crystallization is the same as the former or pinkish rock. To the north of the line of contact the rock formation is very broken, consisting of patches of quartzite, diabase dikes, conglomerate rock and diorite.

The country is quite rough with high and precipitous hills. Small lakes and ponds are numerous. The pine has been mostly cut but here are small patches of thick bush.

Upon my last visit to the camp last week detail surveys had been made of two attractions. I examined all, but will ^{reserve} the full report on those not surveyed until later, but will add that the small attractions seemingly are of little value.

Survey # OXV

Morgan Lot 12, Con. 4.

Lines 44 to 56, Rd. 132.

This is located on the south side of a small pond in open country which is little rough with small hills and ridges. The rock is well exposed, especially along the edge of the pond, where the highest attraction was obtained. It is the light green diorite or norite. There is no contact with granite in the vicinity, the main line of contact being about one half mile to the north. Some 300' to the south the rock changes to the pinkish norite. The rock is not stained. Readings of 80 and 90 were obtained over a small area and the rock here was closely examined and is well mineralized. Sample #318 will give you the character of this rock while #319 was taken from areas of low attraction.

The survey shows the attraction to be irregular as there are small areas of quite high attraction scattered over the surveyed ground.

(3)

Survey #CXVI

Morgan Lot I2, Con. 4.

Lines 25 to 30 Rd. 40

This is located near the summit of a high hill some 800' north of a small lake. The hill has a fairly steep slope to the south but a much less steep slope to the north. The country is fairly clear of bush.

The rock is well exposed and consists of light green norite with some pinkish norite mixed with this on the surface. No stain could be found in the area of highest attraction, which is small.

The survey shows irregular and, for the most part, low attraction. I judge the find to be rather poor.

Sample #320 was taken within the area of highest attraction.

The detail survey maps will be retained until more of the surveys are made.

Attraction #CXVIII

Morgan Lot II, Con. 5.

Lines 0 to 7 Rd. IIO.

The detail survey of this had not been made at the time of my visit.

The attraction is located on the southern side of a high hill which has a rather abrupt slope for about 150', then a gentle slope for about 500', then an abrupt slope for 100' to a small creek. The attraction is close to the summit. The general survey shows a very extensive area of attraction, with a smaller area of quite high attraction.

The attraction is located immediately along the contact of the conglomerate, quartzite, etc. rock to the north and light green norite

(4)

to the south. Considerable stained and decomposed rock was found in the area of highest attraction and some stripping was done which revealed some gossam. Ranger has sent me word that the place looks very good. I am sending men up to sink test pits, etc. and will send you fuller reports of this work and the detail survey after I make my next visit there.

Sample #32I was taken within the area of highest attraction and stained rock. It is well mineralized, light green morite.

I have decided to cover the ground in this region only to the extent of a half mile, north and south, of the main line of contact. If we should desire to cover the remainder of the belt of morite we can do so later, but I think the northern portion is by far the most likely part.

Falconbridge Lots II and I2 Con.4.

As formerly reported the shaft here was sunk to a depth of 48' when considerable water and quick sand were encountered which made further sinking impracticable for the present. An inch and a quarter pipe was driven down to test the depth of the sand and gravel and hard bottom, probably bed rock, was struck at a depth of 32' below the bottom of the shaft making the entire depth of the gravel 80'.

At this point work was stopped here and the men moved to the township of Garson.

Garson.

Survey #XLV

Garson Lot 4, Con. 3.

(5)

Four rows of test pits were sunk across the belt of highest attraction. The rock was found to be diorite or norite similar to that in the township of Blezard. One pit, namely about at reading 13, Line 2 east of zero, showed rock slightly stained for a thickness of $1\frac{1}{2}$ ". Pits were sunk around this and an area of about 30' square was found to be slightly stained but only on the surface. There was scarcely any mineralization. A shot was put in within this area and sample #322 taken.

I believe that the value of this location depends upon the results of the work in the township of Blezard, as the formation and rock are similar.

This sample #322 and sample #323, which was taken on the west side of zero, where a reading of -30 was obtained, you might test with a magnetic needle. The former effects the needle considerably.

Survey #IXVII

Blezard Lot I, Con. 2.

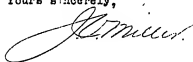
Rows of test pits were sunk here every 100' across the belt of attraction. They show the rock to be a very fine grained diorite, perhaps a diabase. No stain could be found and further work, if desired, will have to be done with the drill. I, at first, thought the attraction was due to a dike of diabase, but as there is quartzite immediately south of the attraction and the fine grained diorite extends northward for a considerable distance merging into dark green diorite, somewhat chistose in character, it hardly seems that there can be a dike here. Further examination will be made as to the rock and a report sent you.

(5)

Bleazard Lot 3, Con. I.

Three of the small attractions in this lot were examined and although slight stain was found and some shots were put in, no ore was found and I believe owing to this fact and that the attractions are very slight and small in area that these localities are of little value.

Yours sincerely,



Maps sent by this same mail....

Morgan Lot 12, Con. 4.

"	"	I2	"	5
"	"	II	"	4
"	"	II	"	5

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company
of New Jersey.

Sudbury, Ont., August 14, 1908.

Mr. T. A. Edison,
Orange, N.J.

Dear Sir:-

The drill is now down about 400' and there is no ore yet. I write to ask you if you want this hole to be drilled 750' if no ore is struck. I have arranged for about 700' of rod which will give us a total depth of about 1000' if you wish to go this deep.

Kindly let me know by telegraph so that I can arrange for the wood etc.

Yours truly,

J. Miller

*Telegram
Aug 17-1908
John V Miller*

Sudbury Ont

*Provide rods for one
thousand feet,
Edison*

TAE

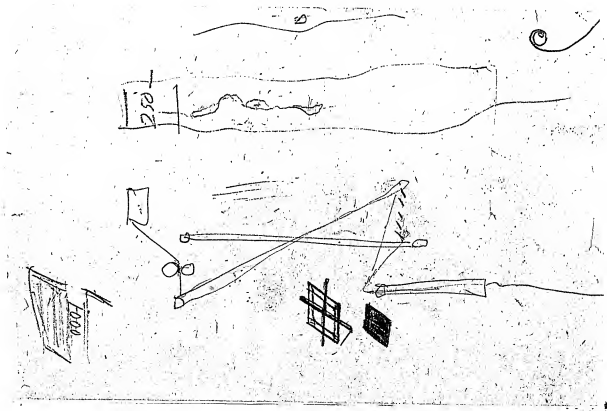
Aug. 17, 1913

J V Miller —

Your samples 322 & 323 are full
of magnetite about 15 percent. This
would produce a high reading &
such a locality would be dangerous
& no good — This is first instance
of magnetite of more than one percent

Σ

[ON BACK OF PRECEDING PAGE]



Nickel Search
THE FINANCE AND GUARANTEE CO.,
80 STATE STREET.

BOSTON, MASS.

Sept. 2, 1903

*Answered
Sept. 10. 1903*

Would like to see a sample

E

Mr. Thomas A. Edison,

Orange, N. J..

Dear Sir;

I understand you are in the market for the purchase of a nickel mine. I have such a one in this Country, the ore being metal nickel not salts of nickel, as is the case in Canada. This mine has had several hundred feet of development, the ore having been smelted, and gives values from \$60 to \$80 per ton in nickel; vein showing 5 foot face ~~from~~ present development.

As you know, metalliferous nickel is extremely rare. This is not a prospect but is a developed mine and will stand the most rigid investigation. I presume you have any number of these propositions submitted to you, but please do not confound this with the average mining prospect.

I should be pleased to give you full particulars and proof that will substantiate statements made herein, should you desire them.

This property is in the market at the present time but has never been offered to anyone, you having the first opportunity to purchase same.

An immediate reply will greatly oblige,

Yours very truly,

J. W. Keates

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., Sept. 4, 1908.

Mr. T. A. Edison,
Orange, N. J.
Dear Mr. Edison:-

W. S. Mallory

The drill in hole #3 is now at a depth of 622' and the core consists of diorite or norite, showing no change.

The drill foreman thinks that he can go to a depth of 1000' with this machine and I have arranged for that length of rope. When we finish this hole we shall move the drill to the place you selected when I was in Orange, or as near that as possible, unless I hear from you to the contrary.

We purchased from Dessau nine diamonds at the value of \$48.00 per carat which weighed 25 and 20/64ths. carats. The latter seems to think they are good stones and that the present equipment will last us this hole.

Yours truly,

J. P. Miller

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont. Sept. 26, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

Miller - I am glad you struck granite at the depth you did now we shall have a chance to strike the granitic for miles to the E

I am sorry to inform you that we have reached a granitic formation in hole #8 and after drilling about twenty feet in same to make sure we were correct we have stopped this hole and are today stopping the drill. The depth at which this granitic rock was found is 874' and it has continued to a depth of 895' where we have stopped. The rock previously to this was diorite of the same as we have been drilling in from the start. It is barely possible that this granite rock is merely a patch similar to several which are visible in the vicinity on the surface and which have a varying area, some as much as 20' or 30' across. Samples were taken from some of these and compared with the rock from the hole and found to be practically the same as far as one can judge with the eye.

However an examination of the belt of granitic rock immediately south of the Cameron Mine or the belt of diorite in which we are working, was re-examined and a sample compared with the rock from the hole, and while there is some difference the two samples are very similar. Still the rock from the drill hole resembles more the rock from the patches of granite enclosed in the diorite in the vicinity of our work than the rock from the belt of granite to the south.

If this granite is merely a patch we might be able to drill through it in a little time but the progress of drilling is very slow, as we made only about three feet a shift. Then there is the chance that we

THOS. A. HOISON,
President.

W. S. MALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.

have encountered a seam or that this patch extends to a great depth, in either of which cases we would not want to continue.

Considering the fact that we are going to sink another ~~deep hole~~ I have decided that it would be best to discontinue in hole # for the present. If in the next hole we encounter this rock at the same ~~depth~~ we will be certain that we are on the bottom granitic formation. If we do not strike it and it seems that we have merely encountered a patch in hole #3 we can return to it. I trust this will be satisfactory to you.

We shall move the drill to the location which you selected when I was in Orange and will arrange to sink the hole to a depth of at least 1000'. The hole will be inclined at an angle of about three degrees, just enough to insure the direction which will be towards the south, i. e. to the side of the base line where the ~~readings~~ ~~gradually~~ ~~the~~ inclined. The direction will be also parallel to the line of the first ~~series~~ of holes.

I think I shall send samples of the ~~granitic rock we encountered~~ of the patches of granite on the surface in the ~~vicinity~~ ~~of our~~ ~~hole~~ and of the belt of granite to the north of the ~~central~~ ~~line~~ to Dr. Coleman, the Provincial geologist who has spent the last two summers making a geological survey of the nickel formation. He will doubtless give some advice on the matter as to whether we have encountered merely a patch or the ~~granitic~~ ~~granite~~ ~~of the~~ ~~northern~~ belt. I believe you would have no objection to this.

Regretting that I can not send you a more ~~favorable~~ ~~report~~ ~~will~~ ~~hope~~ ~~that~~ we shall strike better luck in our next hole, I remain,

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

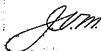
Sudbury, Ont.,.....

Yours sincerely,



F. S.

The patches of granite above referred to as appearing on the surface in the neighborhood of our work are patches enclosed in the diorite of the main belt. Similar patches are somewhat scattered across the belt of diorite.



*Mr Mallory
I have written Mr Edison as per request
of Mr Edison and Mr Edison tells me to show you
this letter
J. F. Randolph*

[ON BACK OF PRECEDING PAGE]

MINING EXPLORATION COMPANY
OF NEW YORK

MINING EXPLORATION COMPANY
OF NEW YORK

MINING EXPLORATION COMPANY
OF NEW YORK

MINING EXPLORATION COMPANY OF NEW YORK

MINING EXPLORATION COMPANY
OF NEW YORK

MINING EXPLORATION COMPANY
OF NEW YORK

MINING EXPLORATION COMPANY
OF NEW YORK

The patches or wastes above referred to as occurring on the
surface in the neighborhood of our work are patches exposed in the
diorite of the main belt. Similar patches are sometimes noted
across the belt of diorite.

JFR
Deposits of porphyry
Cort of Lila per foot
wchly *c

*See map of
the area
of the
main belt
of diorite
in the
vicinity
of the
main belt
of diorite
in the
vicinity
of the
main belt
of diorite*

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., Oct. 6, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Sir:-

Today I received a letter from Dr. Coleman, the Provincial geologist, relative to the granite formation we struck in the third hole in answer to my letter to him. It is as follows:...

"In my opinion you have a good chance of finding the porphyry again beneath the granite which your drill has struck, and I should think it worth while to go somewhat deeper to test the matter. The drill core granite is more like the granite from an inclusion which you expect than like the granite from the south. In any case I should be surprised if the porphyry ended downwards without at least some ore. My theory leads me to expect ore at the lower contact of the porphyry and the country rock."

The rocks referred to are the specimens of core of the granite formation, one from a patch of granite near the drill and showing on the surface, and a sample of the belt of granite lying south of the main belt of porphyry opposite the Cameron Mine and about south of where the drill is located.

From this letter it seems that Dr. Coleman thinks that we have merely struck a patch of granite and that we could drill through it, as was suggested in my letter of the 26th. of Sept. The drill has been moved to the new place and was last evening at a depth of about 50'. The rock encountered is about the same as that in the other holes.

I will send you a full report of the surveying work next week when it will have been completed.

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company
of New Jersey.

Sudbury, Ont.,

Drilling work in the township of Graham has not been begun owing to the fact that the drill contractors have asked that the work be postponed for a time until they can complete another job.

Yours sincerely,



Sodbury
1903

REPORT OF MINING WORK IN THE SUBBURY DISTRICT, ONT. OCT. 19, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

Following is the report of the surveying and prospecting work carried on in the townships of Blezard, Morgan, and Creighton.

MORGAN TOWNSHIP.

The surveying party has completed the work in this township, having covered the entire belt of the nickel bearing eruptive in the township with the exception of the inner edge along the western boundary. The lots covered are as follows...

Lots 10, 11, 12.	Con. IV.	Entire.
" 9.	" IV.	North half.
" 10, 11, 12.	" V.	South half.
" 9.	" V.	South west quarter.
" 2.	" V.	North third.
" 3, 4.	" V.	North half.
" 5.	" V.	North east quarter.
" 1.	" VI.	Entire.
" 2, 3, 4, 5.	" VI.	South half.

Several localities of attraction were found, some of which were described in my report of August 14th., but those in lots 1, 2, 3, 4, and 5, Concession VI, are of little value and will not be described further than they are located in conglomerate rock or on diabase dykes, the rock containing considerable magnetite but not stained nor mixer-

(2)

alized. The attraction is rather small in extent and low in strength. Three of these were surveyed in detail and the maps are sent with this report.

Survey CXVII

Morgan Lot 12, Cox. V.

Line 39, R4. 90.

This is located at the foot of a high ridge, where the rock is well exposed and is diorite. The place is some 1000' north of the main contact and considering the character of the ground, location and survey, the find is of little value and not worth taking up.

Survey CXVIII

Morgan Lot II, Cox. V.

Lines 0-7, R4. 110.

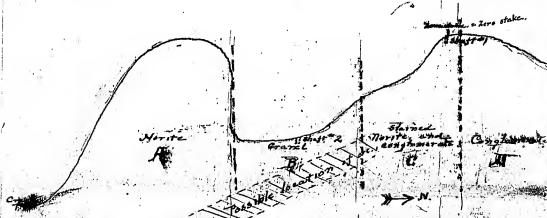
A description of the ground about this find was made in my report of Aug. 14th. and nothing more can be added to this. Since that report however the detail survey has been made and three men have done considerable work in test pits, stripping and so forth. We have been unable to uncover any ore, but on the hill side and especially at zero stake where a shallow pit or shaft, some 12' deep, was sunk, rock containing a fair percentage of mineral was found. A sample from this shaft will be sent with this report. There is considerable stained rock and perhaps gossan over a considerable area, but that at the foot of the hill appears to be more float than stationary rock.

Comparing this place with the Levack property of Tough's it would seem that we should have ore here and I am greatly disappointed that we have not found it in our pits. It may be however, as Ranger believes that we have been working only on the border of the deposit, which is farther south, or at the foot of the hill. Two test pits were sunk

(3)

here which revealed about 7 or 8 feet of stained rock, or rather broken ground or gravel, and then solid diorite, slightly stained on the surface. As the readings were very low above the pits and as there was no indication of ore in the solid diorite, beyond very slight mineralization, I did not think it advisable to sink a shaft here, and continued the work near the summit of the hill where we obtained the highest readings.

Perhaps a rough sketch would give you a better idea of the locality.



Section A. This is a large hill of morite with a steep northern side a south side sloping off much more gradually to a creek. This is the northern edge of the main belt of morite running through the township.

Section B. The rock here is practically all covered with dirt and gravel. Here were sunk the two pits above referred to, showing stained ground or gravel for a depth of 7' or 8'. This perhaps has been washed down from the hill.

Section C. Southern side of hill where the rock is highly stained

(4)

and mineralized more or less. The rock is mostly norite with patches or strips of fine grained diorite or diabase. The readings are quite high near the brow of the hill but diminish rapidly in descending the hillside.

In this section, i. e. at the top of the hill and at zero stake a shaft No. I, was sunk in the norite and conglomerate, showing rock well mineralized but no solid ore.

Section D. This is made up of conglomerate or mixture of quartzite, fine grained diorite and granite, and forms the northern side of the main contact.

Work here has been discontinued for the present owing to the fact that the lawyers in Toronto have been unable to get us permission from the lumbermen to carry on mining work. Morgan is under timber license and no mining work is supposed to be done in it. Our lawyers at first said to go ahead as they thought they could get the necessary permission but upon inquiring of the lumbermen, they have been turned down and have advised us not to continue work for the present.

The locality is well cleared of timber and we have made arrangements to have a government timber inspector examine the lots as soon as possible, with the idea that he will inform the Department that all timber has been removed from the vicinity and mining work would not endanger the pine remaining in the rest of the township.

As we have been unable to locate any solid ore on the Hill, top or side, and as sinking shafts at the foot of the hill through the surface covering and barren rock would be very expensive, it seems to me advisable to put a diamond drill on the property, as soon as there is suffic-

(5)

cient snow to afford good transportation. With snow on the ground access to the locality will be comparatively easy.

Survey OXIX.

Morgan Lot II, Con. V.

Lines 8-9, Rd. 148.

This is located on the shore of a small lake or pond some 800' north of find OXVIII, in fairly flat country. The rock is a mixture of granite and aplites, somewhat like a gneiss, as shown along the shore or edge of the water. There is no stain and the rock is not mineralized. It is a considerable distance from the main contact and although the readings are fairly high and extensive, the rock formation is not encouraging. Test pits have been sunk across the belt of the attraction and the men report that they have revealed no stain nor different rock. I have not been up since this work was done but expect to make a trip up there this week.

Survey OXX.

Morgan Lot II, Con. V.

Lines 10-15, Rd. 76.

The value of this find depends considerably on that of OXVIII, as the two are adjoining, the readings of the general survey being practically continuous. This place is however less probable than the other as it is some 200' or more from the main contact and is located in solely conglomerate rock. There is no stain nor surface showing and perhaps the attraction is due to the magnetite in the country rock.

The base lines for this and survey OXVIII are in the same line some 300' or 400' apart.

Survey OXXI.

Morgan Lot 10, Con. IV.

Line 34, Rd. 30.

(6)

This is of no value, I believe, as it is located on the very edge of a high bluff of norite, some 1200' south of the main contact. There is no granite or other kind of rock in the vicinity nor is there any surface showing and the attraction is in all probability, is due to the magnetite in the rock and the sharp edge of the rock formation.

Survey CXXII.

Morgan Lot 10, Con. V.

Line 43 Rd. 110.

The location of this attraction is some what similar to that of CXXIII, being on the same general ridge, along the same contact, and within the area surveyed there are patches of stained rock, which is somewhat mineralized. Some stripping was done where the high readings on lines 20 and 22, east of zero, were obtained. Here the rock seems to be mostly diabase and porphyritic diorite, quite magnetic and stained. West of line 18, east of zero, the rock is practically all covered, the base line running through a swamp. An attempt was made to sink pits across the attraction, about at line 2 (w of zero), on which a reading of 50 was obtained, but water prevented the completion of the pits. When the ground is frozen we can uncover the rock. An idea of the value of this will be more easily arrived at when when we have proven up CXXVIII.

Survey CXXIII.

Morgan Lot 10, Con. V.

Line 36, Rd. 121.

This is located on a patch of diabase, specimens of which effect the dip needle greatly and a small horse shoe magnet gathers a large percentage of the rock. On this account the place was considered of no value in the present work.

(7)

Surveys OXXIV and OXXV are of no value being respectively in solid diorite, on a sharp ridge with no surface showing, and in conglomerate rock of quartzite etc. with no surface showing and no contact with norite.

Survey OXXVI.

Morgan Lot I, Con. VI.

Line 10, Rd. 188.

This is located on patented ground and covers a mining location, the zero stake of the detail survey being on the discovery post. The attraction is located in a ravine immediately on the contact, diorite or norite on the south hill and quartzite and granite on the north hill. The ground is covered with boulders more or less stained. No sample was taken as no specimens of any value could be found. The attraction is rather limited and I think the claim hardly worth investigating at the present time.

This completes the work in Morgan. The lots and portions of lots applied for are as follows...

Morgan Lot 12, Con. IV.	S 1/2 of N 1/2. and N 1/2 of S 1/2.
" " II, " V.	S 1/2.
" " IO, " V.	S 1/2.

OREIGHTON TOWNSHIP.

Upon completion of the work in Morgan the surveying party was moved to the Gertrude mine in Oreginton and the following lots were surveyed.....

Oreginton Lot 2, Con. I.	Entire.
" " 2, 3, 4, 5, 6, 7, 8, 9. Con. II.	Entire.
" " 2, 3, 4.	" III. Southern portion.

(8)

Lots 2, Cons. I, II, III, were surveyed by running 100' Lines, which cross the entire belt of morite on which the Creighton and Gertrude mines are located. In the remaining lots only four lines each were run, just sufficient to roughly outline the attraction and give us grounds for our applications.

A detail survey was made about #1 shaft of the Gertrude Mine, a map of which accompanies this report. On the map is indicated roughly where ore was found by the diamond drill. You will notice that our readings correspond with the ore bodies very nicely with the exception that we do not get readings over the ground where it is known the ore is at some depth and is dipping to the north. The readings seem to be confined to the raised ground about the open pits and probably to areas where the ore shoots come close to the surface, or outcrop. These ore bodies have a dip of about 45 degrees to the north.

Rafa can explain the lay of the land and the condition of the shows verbally and with the map before you better than I can on paper.

The work from this camp was completed last Tuesday and two of the surveying party have returned to the States while one is remaining here to be stationed at the drill in Graham as soon as this work begins.

Applications have been sent in for all the lots surveyed and we have received answers from three as follows....

Lot 2, Con. I. Prior and acknowledged claim by Wm. McVittie.

" 2, " II. Prior but very old applications. Lawyers think we could get it by paying in the first years rental.

" 2, " III. Same condition as the former.

Will you kindly advise whether or not you wish to make payments on any of these lots in this township.

(9)

BLEZARD TOWNSHIP.

As yet we have struck no ore, by the diamond drill, which is now down about 285'. The rock is practically all similar to that in the other holes.

The cost of drilling hole #3 was slightly less than \$3.00 per foot. The cost of diamonds for the hole being very close to \$1.77 per foot. The amount of drilling by the different priced stones was not accurately kept but the above figure is very close to the correct one. I think we shall be able to still lower this figure in the hole we are now drilling.

Relative to the properties of E. H. Davis in the townships of Garrison and Blezard concerning which you made inquiries and sent data, I would say that I have not been on the properties, ^{except Lots 1 & 2 Con. I of Blezard} but since the receipt of your letter I have made inquiries of two or three parties and find that options on these lots have been held by Wharton, who did considerable work on the lots in Blezard, and by Mond, who last year made a magnetic survey of the Blezard lots and did some prospecting work. Both of these parties gave up the options after payments of quite a little money. I have been also informed that there is a small seam of quartz running about five percent of nickel on the property a sample of which McCharles showed me this morning. It is probably from this vein that Davis got the high samples.

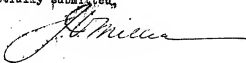
He has listed among his properties Lot 1 Con. II in Blezard. You will remember that we have 140 acres of this lot ourselves and have a lease from the Government for it. Evidently he has made some mistake or

(10)

is trying to sell lots he has no leases for, considering that an old application is holding the lots for him.

I shall immediately visit the properties and send you a report.

Respectfully submitted,



Maps sent by this mail,.....

Morgan Lots 1 to 5, incl. Concession VI.

" " 9 " V.

" " 10 " IV and V.

Creighton Lot 2, " I, II, and III.

" " 3, " IX and XII.

" " 4 to 9 incl, " II.

Detail surveys #CXY to CXXVI incl., and No. 1 Certificate Mine.

Sample #325 also sent.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., Oct. 12, 1903.

Mr. J. F. Randolph,
Edison Laboratory,
Orange, N. J.

Dear Sir:-

Following is an estimate of the amount which will be due on the first of November, which will cover the pay roll and all the outstanding bills.

Pay roll	1200.00
Groceries	200.00
Road to claims in Graham.	125.00
Wood for diamond drill to Oct. 11.	150.00
" " " " " 31.	100.00
<u>Salaries</u>	<u>300.00</u>
	\$ 2075.00

I have a balance of 450.00 which will leave \$1625.00 shortage. I don't probably get through on this but I think it would be well for me to have a little balance to run on and accordingly would like you to send me \$2000.00 as previously.

With the beginning of work by the diamond drill in the township of Graham we shall have to pay on the fifteenth of each month for the work done in the previous month which will average about 400' per month and at the rate of \$3.50 per foot this will amount to \$1400.00. I mention this now so you can make your plans accordingly.

I send you herewith the statement of Denton, Dunn and Boulthée for September.

Yours sincerely,
J. F. Randolph

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Saturday, Oct. 22, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

I have just come in from the drilling camp in Blezard and received your letter regarding the drilling work. It has taken me by surprise to say the least and I am extremely sorry there is any question about the work here. I trust that we can straighten it out satisfactorily.

In the first place I will explain the last purchase of diamonds. Upon the inquiry of the setter, about three weeks ago, I was informed that he had sufficient stones to last him through hole #4 if it did not go deeper than 1000'. He had then seen the diamonds from the last bit that I brought up with me from the laboratory but he had not received them. Shortly after this I had a circular from Yawger-Lexow, big diamond men from New York, that the price of carbons had jumped to \$8.50 and would probably go higher. Local drilling men had the same opinion, or information. A few days after this the agent of Yawger-Lexow was here with a good assortment of stones and believing it would be advisable to purchase some stones in advance if they were really good I took the man out to the camp and seven stones were selected by our setter.

At that time therefore we had on hand and in use the stones we purchased from Passau and the remnants of those from the U.S.S. and laboratory (first lot of twenty stones.) We had also unused the seven stones we had just purchased and the ten stones from the last bit

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

from the laboratory.

When the setter first saw the stones from U. S. S. he said that they were poor and small. They diminished in size, individually, quite rapidly as I could see. By using these stones in the first hole the cost per foot was \$3.47 per foot. By the addition of the stones from the laboratory this cost was reduced in hole #2 to \$2.72. In the hole we have just finished, namely #3, the cost of diamonds per foot, as I mentioned in my report of Monday, was reduced to about \$1.77 per foot.

I have not the full data to give you the cost of hole #3 in detail here but tomorrow I shall return to camp weigh all the stones, scraps etc. figure out the costs etc., and write you tomorrow evening fully.

I might add that at present our supply of carbons is distributed as follows....

10 stones from last bit from laboratory here in town.

3 stones from Yawger lexow in camp unused.

4 stones " " " " " in one bit with a small old stone.

The stones from Dessau and the laboratory and remnants of those from U. S. S. in two other bits.

Scraps.

The ten stones first mentioned have not been used as they are all under two carats; some mere scraps. They have been held as a reserve.

I have written tonight the drill contractor for their estimate on all our work.

Yours sincerely,



THOS. A. EDISON,
President.

W. S. HALLOV,
Vice-President.

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Telephone Call 311 Orange.

Orange, N. J., 10/23/03/L

Thomas A. Edison, Esq.,
Orange,
N.J.

Dear Sir:--

The postponed meeting of the Board of Directors will be held on Tuesday, October 27th, 1903, at 3 P.M. at the office of the Company, Edison Laboratory, Orange, N.J. to consider the advisability of continuing the diamond drilling in Canada and such other business as may properly be brought before the meeting.

Yours very truly,

W. S. Hallov

V.P.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company
of New Jersey.

Sudbury, Ont., Oct. 24, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Sir:-

Herewith I send you an account of all the stones or diamonds I have received. I send this now and will send the rest of the accounts cost of drilling Holes 3 and 4 and so forth as fast as I can finish them. I trust that you will find this account satisfactory. I believe everything is O. K. here. We have certainly been reducing the price of drilling on each hole.

Hole 4 was down 323 ft. this morning and the rock has been all diorite since we struck the seam of schist similar to that in the other holes. The rock in this hole seems to be slightly more mineralized than in the others. I will send you a sample of the core of this morning.

Yours sincerely,



[ENCLOSURE]

Mining Work in Lucabury District.
Drill Work.

Diamond Account.

<u>Stones received.</u>						
<u>Date</u>	<u>Source</u>	<u>No. of stones</u>	<u>Gr.</u>	<u>Carat.</u>	<u>Cost.</u>	<u>Total cost</u>
June 1 st	Allen & Son Mining Co.	15	38 ^{1/2} to 40 ^{1/2}	25.75	52.30	2025.50
July 15	Edwin Laboratory	20	19 ^{1/2} to 20 ^{1/2}	1.00	52.50	1586.40
Aug. 21	" "	10	10 ^{1/2} to 11 ^{1/2}	1.05	52.50	
" 25	Duncan	9	25 ^{1/2} to 26 ^{1/2}	2.71	48.00	1215.00
Oct. 8	Young & Son	7	31 ^{1/2} to 32 ^{1/2}	4.55	58.50	1864.69
<u>Total</u>		61	106 ^{1/2} to 107 ^{1/2}			\$6691.44

Stones in hand, mining of Oct. 24th.

<u>Date</u>	<u>Source</u>	<u>No. of stones</u>	<u>Gr.</u>	<u>Carat.</u>	<u>Cost.</u>	<u>Total cost</u>
Edwin Laboratory	Stones in bucket	10	10 ^{1/2} to 11 ^{1/2}		52.00	546.80
Young & Son	" " "	3	11 ^{1/2} to 12 ^{1/2}		58.50	87.17
Young & Son	Stones used in drill	4	17 ^{1/2} to 18 ^{1/2}		58.50	1037.46
Duncan	" " " "	9	11 ^{1/2} to 12 ^{1/2}		48.00	558.50
Laboratory	" " " "	5	3 ^{1/2} to 4 ^{1/2}		52.50	164.12
"	Stones used in use	6	1 ^{1/2} to 2 ^{1/2}		52.00	78.00
Young	" " "		11 ^{1/2} to 12 ^{1/2}		2.00	23.56
						\$3071.68

From the scraps I could pick out 6 original stones, either whole or partly chipped, which have evidently been worn down.

The seller has used very small stones and scraps in setting four casing pipes, using about 16 stones per pipe. He states that he thinks about 8 of these are small original stones.

Assuming this to be correct we therefore have accounted for 51 out of 61 stones received.

[ENCLOSURE]

Diamond Account (Cont.)

Many of the stones from the laboratory were very small at the start, averaging less than 1 karat for the first thirty which we have used. The stones from the Ohio Iron Mining Co. seemed to wear down rapidly.

The four larger, better stones we have used have drilled 50' and the loss was \$2.34 per @ 50', which gives a cost of \$6.76 per foot.

All the above weighing I have intended to do myself with the exception of the stones from the Ohio Iron Co. It did not weigh there as we had no diamond scales. Since this morning we have weighed all stones with a special diamond scale.

General Summary of Cost of diamonds -

Value received -	6691.44
" on hand 10/10/20	<u>3071.63</u>
" used -	\$3619.81
Feet drilled -	1756 ft. (Drilling in rock. Not including stones)
Cost per foot -	<u>\$2.06</u>

The value of the stones from the laboratory I have given at a price which I have figured from a letter to the H.G. & P. Co. Boston. of Aug. 26, and therefore I am not absolutely sure as to this, but have not their own bill.

J. V. Miller

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Saturday, Oct. 24, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

Enclosed I send you further reports of the diamond drill work which completes the reports on this work. I shall send you reports of the other work later.

The drill reports are as follows:.....

Hole #3.

The labor varied considerably as we changed fireman, the new man not boarding at camp. The runners and firemen are paid so much a day, \$2.75 and \$1.75 respectively, less their board at camp which has been rated at \$4.00 per week.

The cutting and hauling of the fire wood has been given to contractors at \$1.60 per rack, 4'X8'X2 1/2'.

The teaming is a little high owing to the fact that we had to borrow rods to tie us over until our own rods came.

The diamonds from Oliver Iron Mining Co. and the laboratory are quoted at \$52.50 per karat, the stones from the different sources were not kept separate. The prices of the laboratory stones are a little under \$52.50 as I figure, but you will remember there was some question about this bill at the start.

The cost of the groceries, meat etc. have been calculated on the same basis as holes 1 and 2. This I think should be less but we did not keep an account of the stock used up during this run.

The cost of the supplies have been taken according to the separate sheet sent herewith. I think we should take for this hole the smaller

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,.....

of the two figures, as we should not count the cost of the wood for the shop, drill house, etc. for each hole the same as this figure will diminish the more feet we drill. I have taken the larger figure to be sure of not making our cost per foot too low.

Hole #2.

The labor item here is about the same as in the foregoing.

We have been burning considerably more wood in this hole than in the others but you will notice that we have not averaged as many feet per shift as before. The rock seems to be harder as the drill is kept running as before. The wood we now have to use is also not quite as good as that we had at first.

The weight of the diamonds at the start of the hole were taken by the setter but the weights at the end, or this morning were taken by myself. I think the setter's weights are correct.

The item of board has been reduced considerably as we do not pay our latest dock as much as the former ones. This item will still further be reduced as we proceed.

The item of supplies is taken as in Hole #3.

Supplies.

I have included all the items here that I can find by going over the bills and supplies rather hurriedly, but I think we have counted in practically everything. There may be one or two small items omitted but they will amount to very little.

I have divided the items into those which are rather unusual, some of which will not figure again, and those which are daily expenses and wear.

THOS. A. ROBINSON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sedbury, Ont.,.....

Some of the items we have gotten at different times and amounts so that the prices have varied considerably so I have summed up the total cost and amount used.

All the costs of drilling etc. are figured without consideration of the wages paid to Opyke, stationed at the drill, and my own time and transportation back and forth. These items would figure the same whether the work was done by contract or not.

You will see by the expense sheet for Hole #4 that the cost per foot is only \$2.71, which I think is quite creditable, considering that the Canadian Copper Co. gave their work to contractors at \$3.00 per foot where the majority of the drilling was in ore and not in hard rock. The Consolidated Lake Superior gave contracts for work at the Gertrude for \$3.25 per foot I understand. The lowest figure Smith, or the drillcontractor who did the above work, will give us for the work in Graham is \$3.50.

With the exception of the first two holes I think we have done these pretty well and you will remember that early in the work, in fact at the start we complained of the stones from the Oliver Co., and the stones from the bits at the laboratory were small, some not more than scraps. I believe everything has been done carefully and O.K.

I send you herewith also a plan of the drill hole X, B, 3 and 4. Also the section where hole 4 is located.

I have received today a telegram from the contractors stating that they have a drill the same size as ours but no boiler with it. I had

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sadbury, Ont.,

also a few days ago a conversation with a drill man who is in the employ of the Consolidated Lake Superior Co. He claims to have five or six drills and wanted to get contracts around here for drilling and gave me a figure of \$3.00 per foot on a guarantee of 1000 ft. I inquired of another party about him and was informed that he was some what of a bluffer and did not seem to have a very fine reputation. He perhaps is alright however and I shall make further inquiry of him. He stated that he had a drill one size larger than ours, which has a capacity of 1800 ft. but I rather doubt whether they could drill this deep with our small rods.

Relative to the contract with the drill men I would say that it is rather hard for me to make up one without knowing about how much work you will want done. We could give a contract for Elezard for at least 1500 ft. as you will want to finish this hole 4 and then I think before we leave the locality we ought to try the place where the showing was and where we did the shaft work. However I believe that after you have carefully considered the reports I have sent you that you will keep the present arrangement. In case you still want to change let me know immediately to that effect and also give me an idea of the amount of work you will want done.

Considering the letter and opinion of Dr. Coleman relative to the patch of granite we struck at the bottom of Hole 3, namely that it is merely a patch and that we ought to drill through it, I have thought that it might be better for us to return to this hole and give up the present one for the time being. There is a difference of about 800 ft. now. Let me know what you think about this,

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

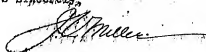
J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company
of New Jersey.

Sudbury, Ont.,

Hoping that I have covered all the work and sent you full information and that you will find everything satisfactory, and hoping that you will telegraph me immediately whether or not to go ahead with the present arrangement, I remain,

Yours sincerely,



[ENCLOSURE]

- SUDBURY DISTRICT -

Blizard - lot 8 Con. II

- Hole #3 -

Total depth - 895

Head pipe - 9 1/2"

Author	Time	Start	Man	Head	Total	Cost
Moving drill from Hole #2	10 hrs.	4.50	2.11	1.00	1.00	
Setting up drill	Blizard 5 hrs.	2.17	1.00	1.00	1.00	
Digging for water	Blizard 2 hrs.	1.00	1.00	1.00	1.00	
Setting & cleaning head pipe	Blizard 4 1/2	1.17	1.70	.90	4.77	
Repairing	Blizard 10 hrs.	2.00	1.75		3.75	
Fire wood - by day labor 1 1/2 day	1 day				11.50	
" " 1 1/2 p. Lardasack	1 day				11.50	
Drilling - (Blizard & Boyer)	20 days	41.60	35.00		76.60	
" " (Blizard)	20 days	41.60	35.00		76.60	
" " (Blizard)	20 days	41.60	35.00		76.60	
					553.50	
					704.50	7.87

Moving drill from Hole #2	1 day				4.00	
Threshing	3 1/2				7.50	
Rebuilding drive rods.	3 hrs.				11.50	
					23.00	0.26
Diamonds						
Blizard & Boyer	@ 52.50				1.00	60
Blizard	@ 48.00				5.00	20
					1.00	7.80

Board						
Coal	@ 60 p. per ton				11.00	
Provisions, meat etc.	Blizard				24.77	
					24.77	2.77
Sudbury						
Blizard, Boyer, repairs, man etc.						
Charge from total work done.						2.04
- Total -						2.76

Note: The amounts & expenses are paid to the
rate according to the work done. Blizard & Boyer
Blizard 2.75 " "

[ENCLOSURE]

SUDBURY DISTRICT, ONT.

Drill hole No. 4.

Blizard - lot 8, Con. II

Дептн $10\frac{1}{2}\frac{1}{3}$ 323'

[illegible]

[ENCLOSURE]

Sudbury District, Ont.

Blizard - Lot B. Con. II

Drill Account.

Source	Kind of Material	Used	Cost per	Total Cost	Cost per ft.
Drill Rods -		Number			
Water Barrel		4	4.50	18.00	
Timber for bracing and drill shaft -	Shap Dills	300' 1" 1/2 500' 2" 325' 1"	5.00 12.00 per ft. 12.00 "	5.00 3.76 4.20	
Tar paper		1 roll		1.23	
Repairs - Blacksmith	Welding plug drill shaft	1		.35	
	Chisel			3.25	
Costs for boring -		2 bundles	.15 ft.	.30	
Drill man's wages				79.57	.026
Auto		196	.52	23.52	
Hose		28		24.76	
Fils	Square	114	Hoops	4.00	
Black bars -	Grid. 10"	2.5	3.25	6.63	
Cone shoes -		17	1.25 ft	6.00	
" springs		4	1.50	6.00	
Spacers -		1	.25	.25	
Spacers -		8	7.5 ft	.56	
Spacers -		17		1.49	
Spacers -		17		.88	
Pipe	1 1/2"	17		1.53	
Cone boxes -		2		5.25	
" -	1" bands	5	90 ft	5.40	
" -	1" bands	1450'	15.00 ft	21.75	
" -	1" bands	10	2.5 ft	2.50	
Oil -	Cylinder	1 1/2 gal		5.10	
" -	Cylinder	1 1/2 "		7.05	
" -	Cylinder	25 "		7.05	
				125.65	.059
Total for work (including stand pipes) 1777.5'		Total		150.76	.084

TAE.

Oct. 26/03

John -

Statements recd today, had
 you sent weekly statements there
 would have been no misunderstanding
 about drilling - You say that
 the rock in hole 4 is more
 mineralized - Can't you crush
 & pan or use glass & get a
 fair idea - This would give you
 some idea of the approach
 of the ore body. I thought
 that on account of rock
 being more mineralized

now in hole 4 that you better
 keep on for a while before
 returning to the deep hole
 & boring through the granite
 as mineralization is a pretty
 fair index of what is coming

Regarding the Contracting
 I was afraid that our
 costs in the absence of
 any information was
 running higher than
 we could get it

Contracted for - you know
the Contractors must make
a profit & yet add a
considerable sum for
risk & we should be
able to do it for at
least three dollars
if they Contract for 3⁵⁰
If you think it advisable
I would be willing to
guarantee the Contractors
at least fifteen hundred
feet at the Bleggs

& we could keep our
drill going also, so as
to settle Bleggs once
for all & settle it quicker
you probably could
arrange with Contractors
to share some of the
General Expense &
thus get our total
drilling down low -
I have been told lately
by an old Drill man

that the Co should
look out for its diamonds
as some drillers have
bad habits "appertaining"
thereto,

Edison

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.

Oct. 28, 1903.

Mr. T. A. Edison,
Orange, N. J.

Dear Sir:-

I have just received the following letter from the drill contractors in answer to mine of last Thursday...

"Yours of the 22nd. to hand and note contents re diamond drilling in different townships in the Sudbury District. There is no doubt that you would have in the neighborhood of 5000ft. If you will provide me with camps on the different properties and roads, I will give you a flat price of \$3.15 per foot but no hole to be deeper than 500' at this price, this to include stand piping. Should a hole have to be cased this would be extra. I have an H Drill" (the size of ours) "1000' of rods at Sault Ste. Marie which I could ship at once; also I expect to ship plant to Graham the last of next week. This price is approximate and I would have to go over the ground before signing contract. If you consider this and wire me I will go down and no doubt we will come to terms, as we are prepared for this class of work."

We are going to put in 1000ft. for the Canada Copper Co. at the old mine and I have to go down for this work."

My letter to them was to the effect that we would give them all our work in four or five townships, averaging about 1000ft. in each, if they would give us a much better price than \$5.00; their first figure. I stated that camps would have to be built in all the places except Blizard and that I think water could be obtained with but much

*Approved
Oct 29 1903
Copy attached*

THOMAS A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sadbury, Ont.,

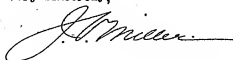
trouble.

This seems to be quite a reasonable figure but in addition to the building of the camps and roads we would have to move the plant from the nearest railroad station to the place of operations and return it. The matter of roads will be a rather small item as we can reach most of the properties in Falconbridge, MacLennan, Morgan and the other places in Blezard with little trouble.

The people who have given us the above figure have done considerable work around here and as far as I know it has been satisfactory in every way. They have a good reputation. The other firm about which I wrote you Saturday is connected primarily with the Soo people and is taking up diamond drilling by contract as a side matter. I have not been able to learn anything further about ^{the} party but will make further inquiries if possible and let you know.

Kindly telegraph me relative to the matter whether or not I should make the contract and about how many feet we could promise them. It is possible that we would get a still better figure if we could guarantee them more work.

Yours very sincerely,



THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sandbury, Ont.,

(T. A. E.)

P. S.,

Since writing the above I have had a conversation with the captain of the Bertrude Mine relative to the drill contractor from the Soc. He states that as far as mining work is concerned the man is O. K. but that he has had no practical work in diamond drilling and knows scarcely anything about the work and that while he has made many statements that are far from true and showed that he knew little about the work. He has to rely solely on the drill setters or boss of the drill gang. I have asked that the lawyer note him out from his Soc agent concerning the reliability of the contractor.

The captain of the Bertrude Mine, Thayers by name, is an old diamond drill man and has done quite a little work here and in the States. As the Bertrude Mine is shut down and he has little work to do it is possible that he will take up drilling again and I have asked him to give us a figure on all our work amounting to about 8000 ft. in four or five townships. He says he will consider the matter and let me know in a couple of days. He has no drills himself and therefore would have to pay them or arrange to rent them. I suggested that we rent him the one we have. I expect to hear from him about Wednesday. Would it be satisfactory to you to rent out the drill we now have?

Yours sincerely,



[ATTACHMENT]

Miller - I think we better not tie
ourselves up to one Contractor
for so many feet, also I would
not contract with parties who
couldnt drill beyond one thousand
feet. I think you better only
Contract \$10,000 + guarantee for
say fifteen hundred feet in
one place with the right
for more, then we can quit
anytime. - I would rather
pay 3,500 + limit the amount
guaranteed than 3,150 on
a large Contract, also dont
Contract with any but reliable

people, the proprietors of
which are drill men themselves.
Submit Contract to me before
Closing -

\$

Edwin

Oct 27-1903.

Miller

Use your judgement about
applying for the lands in Creighton.
I think you should do so

Edison

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company

of New Jersey.

Sudbury, Ont., Oct. 29, 1902.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

In answer to your telegram of yesterday I send you enclosed a list of the properties held by the Mining Exploration Co. and the Edison Storage Battery Co., an estimate of the monthly expenses, and several propositions relative to the drilling work by contract.

Relative to the list of properties I would say that although the yearly rentals are due as designated I believe that the payments might be postponed for a time as the Department seems to hold claims of other parties without any payments at all, and will undoubtedly advise us if any parties are trying to obtain the claims before they would withdraw the properties from us. The lawyers in Toronto could keep us posted.

I have separated the list into those leased outright, those as yet merely applied for, and those properties which are similar to Lot 3, Concession 22, of Ebeard where the drill is now working and which have been as yet merely applied for. It will be necessary for you to sum up the different amounts according to what payments you wish to make.

Estimate of Monthly Expenses.

Pay roll. Company's man on each drill, if drills are working in different localities, and J. V. M.	\$30.00
Company's drill. Drilling 400' per month at \$3.00 p. ft.	1200.00
Contract " " " " " " \$3.15 " "	1260.00
Sundries	300.00

- 347876 -

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,.....

(2)

The cost of the company's drilling is put at \$3.00 per foot as an average. In some places it may be more while in others it may be less, probably all the work will be less than \$3.00 per foot.

Contract drilling is given at \$3.15 as a maximum.

Contract Drilling Propositions.

Following are five propositions from three different parties covering the drilling work in the townships of MacLennan, Falconbridge, Blenzard and Morgan, amounting to 4000ft. as a minimum.

Rat Portage Diamond Drill Co.

Total drilling of 5000' as a minimum. At \$3.15p.ft.

Includes the work in Graham.

Includes all expenses with the exceptions of building camps, roads, transportation of outfit to locations, and core boxes.

This firm has done drilling for the Canadian Copper Co. and Clergue, and others. I quoted their letter relative to the work in my letter of the 26th. inst. to you.

T. Travers, Sudbury.

Total drilling 4000' as a minimum. At \$3.00p.ft.

Includes all expenses.

Travers is the former captain of the Gertrude Mine, who has just been relieved of his position on account of shutting down the mine. He has had considerable experience in drilling in this district and the States. Can devote his entire time to the work and is anxious for it.

H. H. Gault, Grand Rapids, Ont.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

(3)

Raymond W. Seelye, Sault Ste. Marie, Ont.

I quote his propositions which he wrote out for us here:

"I beg to submit my tender for the 4000ft. of Diamond Drill work which we were discussing today.

In making this tender I have drawn three propositions in order to cover the method of working which you may like best.

I. I will undertake to do the 4000ft. of drilling for the rate of \$3.10 per foot and will do all team work, road making, camp building etc. at my own expense.

This figure to cover porite, siorite, ore and not more than 15ft. of granite or quartzite in each hole.

This last mention is made because I understand it is your pleasure that after passing the contacts such a distance is to be drilled in order to prove that the contact has been past.

II. I will undertake to do the 4000ft. of drilling for the rate of \$2.90 per foot; you to furnish all team work, in connection with with moving the drills and camp buildings and you to construct all camps and roads. The conditions of drilling granite and quartzite to be the same as in proposition I.

III. I will undertake to do the first 1000ft. of drilling for the rate of \$3.20 per foot and will do all team work, road and camp work at my own expense. If I find that the work (drilling) can be done for less than \$3.50 per foot I will then do the balance for the rate of \$2.75 per foot.

In this case you are to be advised each day of the expense of the work and will judge the matter at the finish of the 1000ft.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

(4)

The conditions re drilling granite or quartzite to be the same as in proposition I. "

Since writing the above he has verbally agreed to sink the stand pipe in Falconbridge, Lot 12, Con. IV on a separate basis for \$1.50 per foot.

Seelye is now manager of the mines for the Consolidated Lake Superior Co. and is located at the Soo. He wishes to take up drilling as a side matter. Is entirely unaquainted with drilling work in this district. He, himself, claims to have done considerable drilling work in iron, both in Canada and the States. Others say he has had no practical drilling work, merely having drills under his management as manager of the mines. However he is said to be a first class mining man. He is very anxious for the work. It will be necessary for him to rely upon his setters for the carrying on of the work in detail as he will be at the Soo most of the time. For his reliability he refers us to Cole and McDonald, drill contractors in the Minnesota iron range, and other contractors there.

We had a further verbal understanding relative to his third proposition to the effect that if he found he could do the work for any reasonable amount less than he now estimates he will reduce the price he has given us for the remainder of the work, *even if it does not reach the \$250,000.*

Relative to the matter of giving contracts for the entire drilling work here there are several points for you to consider and decide upon.

(1) Matter of risk to carbons and plant.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

(b).

As far as I can learn, with careful work, the risk of losing bits is small as the rock is generally soft.

Are you willing to stand this risk?

(a) The pay roll will be the same whether the work is done by contract or not.

(c) My knowledge of the work has been derived merely from the work in Bismarck. What obstacles will be encountered in the other places, such as scarcity of water, sinking or staying pipes to considerable depth (in Falconbridge) etc. I am doubtful about.

(4) In Falconbridge, Lot 12, Con. IV, in the gravel beds, there will be considerable stand pipe work. As we are fairly sure by the shaft and test pipe that there is water to a depth of 80' at least the cost of the entire holes per foot will be greatly reduced. In the proportions above, except drill bits, this stand pipe work will cost per ft. as much as the rest of the drilling.

Of course boulders may be encountered which will increase the expense but our settler seems to have little fear of them.

(5) If the company could rent another drill and have two working at the same place or locality, the expenses of the latter, and to guard company's interests, cook and the like will be reduced half.

(6) With tested and rounded diamonds the cost of the carbon per foot will be reduced still more.

(7) Drilling in ore is much quicker and easier and therefore cheaper.
Conclusions.

With good carbons and in softer rock, as the other localities beside Bismarck will undoubtedly be, and especially in ore, the cost per foot

THOS. A. EDISON,
President.

W. S. HALLIDAY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,.....

(6)

will be considerably reduced. As the work of the winter will be practically all drilling work my entire time will be on this and therefore we save what the contractors must receive for their time to manage the work. The company might as well stand the risk of carbons and bits being lost, which is small, as pay the contractors to run the risk.

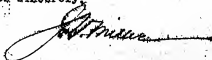
Water I believe, can be obtained in all the places, except Morgan, without much trouble, and in Morgan it may be necessary to haul it.

If we can't make a success of it under the present arrangement we can let contracts at any time.

Relative to the mineralization of the core from hole #4 I think my statement rather mislead you. I intended that you should understand that the entire core from the top has been more mineralized, but to a very small extent. The sample I sent you by registered mail of the core will give you an idea of the rock. Specks and small pieces of mineral are a little more numerous in this entire hole than the others. On Tuesday evening the drill was about 360' deep the rock being a little.

I trust that a check covering the expenses for the next month will be sent me as I have a balance of only about \$50.00.

Yours sincerely,



THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., Oct. 30, 1905.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

*Will pay no further
attention to Davis
properties*

A partial examination of the properties of E. H. Davis in the townships of Elizabet and Garson have been made and enclosed I send you a short report on the mine located on the Elizabet lots. This was the only place that I could find any show whatever, although I covered practically the entire contact in the lots mentioned except those in Concession II; one of which we own and the other I have previously been over and found no showing of ore.

I was unable to locate the unusually large showing in Garson that Mr. Davis mentions, but as the country is thickly covered here with small trees and brush I may have missed or did not reach it. I have since gotten a better idea of the location of the supposed show from a representative of the Mond people who was on the property. On another trip I might be able to locate it. This man informs me however that the show amounts to little.

If you want me to make a more thorough examination of the properties, making a survey of all the contact etc. kindly let me know and I will make another trip there and arrange for further survey work.

Yours truly,

J. F. Randolph

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company

of New Jersey.

Sudbury, Ont., Nov. 2, 1903.

*Mr. Mallory
He has already
shown this letter to Mr. Edison
JMB.*

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

Enclosed I send you slips showing in colors the rock encountered in the different holes on slips measured to scale of twenty feet to the inch. I send these with the idea that you will have the maps of the two sections I sent you enlarged to this scale of 20' to the inch and then paste these slips along the line of the hole. I propose to send you a slip every 100' so you can add this to that you already have and thus keep the nature of the rock encountered clearly before you.

The dark green shows porphy.

Light green shows porphy mixed with considerable quartz and feldspar.

Blue shows schist.

White shows the surface covering of clay, mud etc.

Red shows granite.

(Have not been able to decide upon the color for the ore we have encountered.)

Trusting that this will be O. K. I remain,

Yours truly,

Edison returned *J. P. Randolph*

11/9-

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., Nov. 2, 1900

Mr. Thomas A. Edison,
Orange, N. J.

Dear Mr. Edison:

Following is a statement of the expenses in sinking
No. 4, from 324' - 404' 8" and the total cost.

	Total Cost.	Cost per ft.
Water	\$80.96	1.00
Drilling in supply	4.00	.049
Iron rods	39.05	.458
Drill bits	137.19	1.700
Coal	10.66	.122
Explosives etc.	13.55	.188
Based on 1" 324'	6.77	.684
Drill bits	\$232.45	3.611
Drill bit basin.		
Total cost for 324'	577.47	32.89
1" 404' 8"	\$1169.55	16.78

The increased cost is due to the fact that the
haul for coal to four days was from recent, causing
drill bit, as the steam could not be kept up.
The of course has increased the cost of labor, steam
and fire power. We have also been compensated by

THOS. A. BRISON,
President.

W. S. HALLOVY,
Vice-President

J. F. SANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,.....

the timber license to pay him now the 50¢ per cord agreed to then he gave his consent to the Government to allow the granting of a lease. It is very much harder to get good dry wood now and the Contractors demand more money. I have made a temporary arrangement with them for 175¢ for first class wood. As soon as snow is on the ground I think we can cut down our fuel expenses considerably.

The cost of carbons is a little higher than the last report, most of the cost falling to the rounding up of the larger - Lepor stones. One of the small stones from the laboratory also broke in two & had to be paid with the scraps.

I enclose a contract for 700' of diamond drilling with the Pat. Postage Diamond Drill Co. for your approval. This is the contract for the rock in Lot 6 Con. II of Graham belonging to the E. S. Ratley Co., which rock you authorized me to arrange for sometime ago. See annex

THOS. A. ROBINSON,
President.

W. S. MALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

To an inquiry letter from this company to know whether
it was they were to have the work I telegraphed
them Oct 12/02 that they wanted to do the work &
then wrote them to the same effect but that the
details of the contract as to price etc. would have to
be arranged when the manager came here.

He has been here today and we have drawn up
the contract which you will notice designates a
price of 3²⁵ per foot, same to cover all expenses
with the exception of the core boxes. This is con-
siderably better than their original figure. They
are ready to do the work now at any time, but
are willing to postpone it until the first of the year,
provided they are absolutely sure of getting it then.

After examining the two places as carefully as possible
I have come to the conclusion that our chances of
striking ore are now as good as I first thought. We
are on a contact of granite and granite, at least
there is a band of granite bordered on the south
by granite. However north of this line, especially as the

THOS. A. EDISON,
President.

W. S. HALLORV,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

Attraction to the east, there are small patches of granitic rock. Whether there are merely patches or belts of granite I was unable to determine as the rock is very much covered. On account of these showings of granite it is possible that we are now on the main belt of granite on which the Creighton and Eldorado Mines are located. Still as we are at a decided contact of the nickel bearing cretaceous and granite and in a fair location relative to the other mines there is a fair chance of making our strike. As we have telegraphed that the Company would loan the work, I suppose we shall have to go ahead with it and if every thing is satisfactory to you kindly sign the Contract and return. I think we can well risk \$500 on the two properties.

The Diamond Drill Co. wish to be protected in some way relative to the pay ment of their bills. Although they think every thing will be all right with the Company and do not care to incur an item relative to this matter in the Contract, as they

J. F. RANDOLPH, .
Secretary and Treasurer

Should be used in order to know when 'dices back
to hole #3 and sink this as far as we can, which
will be about 1100', practically the limit for our
gun rods. If there goes more to continue deeper

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,.....

We shall have to start a new and larger haul,
which must be given to contractors. Our
machines, either by contract or on Company's account,
could not be used there because of the broken
striking of ore. In the mean time the Driscoll
Co. will complete or go ahead with the work
in Graham.

Upon the completion of the work in Ridgeland
for all the work to the contractors making sep-
arate contracts for each place. T. Thomas, the owner,
at the figure of 3^{c} for 4000 yds gives us a figure
of 3^{c} for 1500', which I believe is quite rea-
sonable. I am afraid however, that unless he
gets some work within a couple of weeks he cannot
possibly afford to wait and would have to take up
some other business. If he gets over work he
will do the sitting and manage the work himself.
He is a good man, responsible, and I should like
to see him get the work.

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

If you could arrange with the two companies so that three drills could be in operation I should like very much to tackle the place in Falconbridge where we sank the pit or the place in Morgan. I believe these are our two best places. As stated above the Diamond Drill Co. are willing to wait for a couple of months, so if we can't have the three drills running you might want to try a more likely place first. In this case Travers could start immediately on Falconbridge or Morgan.

Kindly let me know immediately how you would the work arranged.

Yours sincerely
J. P. Miller

[ATTACHMENT]

105

^{Answer}
Miller - 103 L. C. Clev

I guess you better
go back to hole 3 & drill
as far as drill will go

Edison

J. Miller
LONDON:
28 VICTORIA ST., WESTMINSTER, S. W.

PARIS:
40 RUE HIPPOLYTE-LEBAS

NEW YORK:
100-3 FULTON STREET.



TELEPHONE
4045 JOHN.

*Answered
Dec 16/03*
ESTABLISHED 25 YEARS.
JACQUES BASZANGER & Co.
CABLE ADDRESS:
PAROING
LIREURS STANDARD
S. A. M. C. 508 RUEVIVANT.

ESTABLISHED 25 YEARS.

IMPORTERS OF

CARBONS (BLACK DIAMONDS)
AND **BORTZ**

FOR DIAMOND DRILLS.
AND ALL MECHANICAL PURPOSES

108 FULTON STREET.



003 NEW YORK, Dec. 14th, 1903.

Mr. Thos. A. Edison

Orange, N. J.

Dear Sir:-

On Saturday afternoon your representative, Mr. J. V. Miller called on us in regard to some Carbon for use in your drills in Canada, and he showed us some stones which he requested we take over your hands, and made him the following quotations, provided you purchase some of our goods:-

4 stones weighing 5-54/64 karats \$40.00 per karat.
1 " " 5-27/64 " \$45.00 " "

We also gave him on memorandum with invoice Lot 415...
6 Carbons 22-17/64 karats at \$58.00 net per karat. He stated that it was necessary to consult you as regards making any deal and would advise us of your decision early this morning, but up to the present moment have received no communication from you, and kindly request that you let us know at your earliest convenience your decision in this matter, because if it is necessary to forward these six stones for your setter's selection, we wish to insure same against loss in transit.

Trusting you will let us have an early decision in this matter and awaiting your reply, we remain

Very truly yours,

Dis. C. A. W. - E. B.

Jacques Baszanger & Co. *Ca. May*

[ON BACK OF PRECEDING PAGE]

Say that Mr. Miller has gone
to Canada & will test one
of the stones & if all right
will report & we will
come to a trade, better news
the diamonds

26
Thas a E. S. M.

W. de la Haye

Mass

Providence R. I. Dec. 14 03

Mr Howard W. Belcher His report was received of
Orange R. I. unfavorable -

Dear Sir:-

I have

Refusing to your letter of July 15th with
regard to your long time visit to the "Leprosy Mission";
I have had nothing from you since regarding the
matter, but was advised about that time that your
men had visited the property, would be pleased to
hear from you as to what the result of his visit, or
anything connected with it; or, if some of finding
you at home would call upon you to settle
matters over. Trusting for a reply at your convenience.
I am

Yours very truly

Jos. H. Hopkins

9 Church St.

Providence

R. I.

50 Miller



Montreal, Dec 14 1902

Mr. H. H. Mallory

Orange, N. J.

Dear Sir,

It will be necessary for me to have immediately some money to make pay roll & accounts in December & to hasten matters I write you from here. Mr. Lison is taking the men off for 15 days and Christmas & the bill would then pay December, which will be roughly as follows:

Butter	1.25
Ham	1.00
Foramen	5.00
Chapelle	6.00



Montreal, Dec 1902

Road to Graham's -	1.25
Salary to self November	4.00
December	

Groceries & supplies 2.00
\$10.25

The pay roll is on basis 23 days of work & is figured roughly.

Kindly have the money sent on to me immediately.

Yours sincerely,

[Signature]
OK pay 9
WJG

Nickel Mines

Answered
Dec. 30/03

Say I have had men at Sudbury
for 3 yrs & have them there now drilling
you will indicate position of your property
Toronto, December 16th, 1903.
~~if you will deposit the \$1000 I could have my~~
needle man visit them & see what
prospect amounts to

Thos. A. Edison,

New York, N. Y.

Σ

Dear Sir:-

I represent 1720 acres of nickel bearing land in the
Sudbury district, samples of which assay 2% nickel, also considerable
copper and gold.

Am thinking of forming a stock company to develop
the same and would arrange to sell you the controlling interest, or
could sell you the property outright.

This property was secured about 15 or 20 years ago and
has never been developed. If you are interested let me know at
once and I will furnish you full particulars, Government Report,
location, etc.

Yours truly,

662 King St.,
London
Ontario,
Canada

F. G. Knights.

W. A. EDISON,
President.

W. S. MALLORY,
Vice-President.

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., Dec. 28, 1899.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Mr. Edison:—

Last evening I returned from the drill in Blegard and today have been at the one in Graham and I send you the following report of the work.

Blegard—

Hole #5 (vertical) was drilled to a depth of 15 to 20'. No mineralized rock was encountered below 40', as I observed from the top of the drill while I was in Orange.

Hole #6 (vertical at an angle of 45°) is located 2 1/2' from Hole #5 and has the direction indicated on the sketch I send for you. In this hole mineralized rock was encountered between 18' and 22' depths. The mineralization, however, does not seem to be quite as strong as in Hole #5 and its lower limit is quite uncertain, the spot of mineral only being in the last couple of feet and that at 22' depth.

The depth of the hole yesterday afternoon was 74' 5". The rock was being mineralized to any extent below 22'. It will be continued until it has passed under the shaft in which we found the small run of ore.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

Enclose a map and section which will show you clearly the lay out of the holes & the dip of the mineralized zone. The positions of hole #5 and the proposed new hole #7 with reference to the large detail survey are shown on these sketches.

From the section you will see that in all probability the dip of the mineralized zone is northward and at a considerable angle. By taking the limits of mineralization as given above the zone appears to be pinching out, but as these limits are rather uncertain, especially in hole #6 where the lower limit probably should be raised a couple of feet, this pinching out is rather uncertain. From these indications it would seem but therefore to place the new hole (No. 7) about as indicated on the accompanying sketches. The direction of this hole will be about at right angles to the strike of the small vein or veins of mineralized rock now uncovered on the surface & ought to cut the mineralized zone about 85° from where we intersected it in hole #5.

Hole #6 ought to be finished by tonight & Monday the

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President.

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

It will be noted to Hole #7, if no new indication of ore are encountered. Tuesday night drilling will be stopped for the Christmas recess of the mine. The wood choppers will clear land & cut fire wood by contract during the recess.

We have received from Mr. McVitie a smaller & better pump than ours and it has been in service about two weeks & seemingly has reduced our fuel consumption somewhat.

The cost of drilling the last 86' 5" of Hole #5, as figured by Mr. McVitie, whose report has just been returned to me by Mr. Orange, is as follows -

Drillings -	Less 1 53 1/4 lbs.	Total Cost -	Cost per ft.
Labor	10 shifts	\$102.11	1.18
Fuel	14 sacks @ 1.00	61.36	.71
	Due R. Manning for 2 1/2 sacks @ .10	21.00	
		43.37	.39
Electricity meter for drill		5.85	.06
Water - Groceries & coal (estimated)		18.08	.20
Freight		6.88	.08
		\$189.08	\$2.51

It has been necessary to haul water for these holes and they are not in the examples of the previous holes.

THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President.

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,

The hauling so far has been done by the team employed by the Wood Contractor but I think after Christmas it would be advisable for us to buy a team & haul water & wood on our own account, especially if you find another dries here.

I have started the survey of the "bright yellow" attraction area for definition of the horizontal needle & may be able to finish the three preliminary lines before we shut down.

Graham.

Work here is progressing rather slowly on account of the rock being quite broken & trouble occasionally in the care of the plant. This afternoon Hole #2 was down 145' 10", the rock being practically all waste, about like the sample I showed you.

In this hole at a depth of 115' and in hole #1 at a depth of 111', 112 ft. and 113 ft. respectively of core was lost. In hole #1 a loss of 4' in about a 5' run could not be accounted for & attracted attention. The

THOS. A. HOBSON,
President.

W. S. MALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., _____

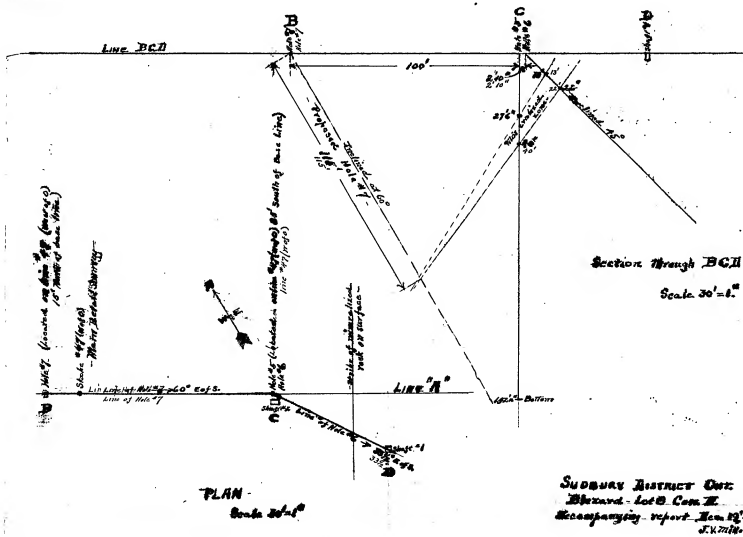
~~There~~ had not been saved in sections so the rock
could not be definitely determined. It is quite certain
however that no ore was struck but it is possible
that ~~the~~ ^{the} core that would give us a clue to the cause of
the attraction. In hole #1 the sluge has been kept in
Fellston & I am taking to Blyard samples of this,
including that where the core was lost, & will test them
with the magnetic separator etc.

I have written the Drill Company with reference to their
moving the drill to Blyard & should hear from them in
a day or so.

On my way back here I wrote Mr. Mallory asking him
to ~~write~~ ^{write} so as to pay off partially the drill order
so that I can get away. As yet I have had no reply.
The ~~time~~ ^{time} is rather short so I mention it in this report.

Yours sincerely
J. T. Miller

[ENCLOSURE]



Canadian Pacific Railway Company's Telegraph

T. D. FORM 1



TERMS AND CONDITIONS

All messages are received by this Company for transmission, subject to the terms and conditions printed on their Blank Form No. 2, which terms and conditions have been agreed to by the sender of the following message. This is an unreported message, and is delivered by request of the sender under these conditions.

B. N. JENKINS, Gen. Supt., Winnipeg, Man.
J. WILSON, Supt., Vancouver, B.C.

W. J. CAMP, Supt., Montreal, Que.
A. W. BASSIER, Supt., Toronto, Ont.

JAS. HENY,
Manager Telegraphs, Montreal.

Rec'd No.	Operator	SENT BY	TO	DATE	SENT NO.	OP. TO	SENT BY	REC'D BY	TIME	DATE
4	By J. W. Wilson			6:35 pm						

Received at the No. 10 Bay ont
 Check 1986 4-04 From Orangeville 190
 To J. O. Miller
Sudbury, Ont.

Contract will be sign I will personally guarantee the payments if that will be satisfactory

Edison

The Mining Exploration Co. ^{of New Jersey} was organized in 1902 and the following payments for stock were received:-

M. S. Mallory	800.00
James Lamm	1200.00
Chas. M. Schwab	10000.00
Edison Storage Battery Co.	8000.00
N. S. Pilling	16000.00
F. J. Byrne	16000.00
James Gayley	40000.00
Thos. A. Edison	800.00
	<u>\$ 28000.00</u>

They also received from Thos. A. Edison \$ for
for prospecting, taxes etc. 23182.90
\$ 51182.90

This money was expended as follows.

26643.07	Exploration in Lyndbury
1847.16	" " Connecticut
1230.00	" " West
9117.22	Outfit
5124.59	Leases & Rentals
3979.82	Taxes
1255.36	Legal Expenses
2066.68	Edison Storage Battery Co.
213.51	General Expenses
615.04	Analysing Ores
51.00	Insurance
35.72	J. V. Miller
108.76	Cash in Bank
<u>51182.90</u>	

**Mining Exploration Company of New Jersey and Related Records
Thomas A. Edison Files - Correspondence (1904)**

This folder contains correspondence and other documents relating to nickel-bearing properties in Ontario. Most of the letters are to or from Edison, John V. Miller, or Walter S. Mallory. The material pertains mainly to surveys and drilling in the Sudbury district.

Approximately 50 percent of the documents have been selected. Most of the selected items contain Edison marginalla.

J. Miller

REPORT OF MINING WORK IN THE SUDBURY DISTRICT, ONT. JAN. 23, 1904.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

*Answered
Jan. 28/04*

The drill of the Rat Portage Diamond Drill Co. started drilling Tuesday afternoon last at hole "e" or #3, located on line #12, east of zero and 505' south of the base line. Considerable delay was caused in searching for sufficient water supply. The continued severe cold has frozen considerably the water in the swamps. We have succeeded however, after digging three new pits, with the old ones we had, in getting a fairly good supply, at least for the present.

The rock in this hole "e" or #3 is practically the same as in the other holes so far. Small specks of mineral are distributed occasionally through the rock. The depth of the hole this afternoon is 85'.

Our machine is being moved to a new set up or hole #9, drilling in hole #7 having been stopped at a depth of 169' 6". In hole #7, rock somewhat mineralized, but not as much as in the other holes, namely #5 and #6, was encountered between 72' 4" and 107' depths. Owing to this difference in mineralization the hole was continued with the hope of striking a better mineralization. None was encountered however. On the strength of this mineralization we have moved the drill farther northward some 120' to hole #9.

Hole #9 is located on line #47 west of zero and 157' (about) north of the base line. It is in the same line as holes #5 and #7. It will be inclined at an angle of 60 degrees to the horizontal in the line of #5 and #7, and towards them.

As this mineralized zone seems to be flattening out we should hit

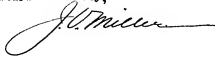
(2)

it within 130' in the new hole.

A stable and small office have been built and the camp is now in fairly good shape. Four wood cutters are at work cutting wood for the two drills and also for future use as it was thought advisable to cut considerable wood and get it piled on high ground while the swamps are frozen.

A man has asked me to inquire whether the company would be willing to sell him the surface rights on the south east quarter of the north half of lot 5 in the first concession of the township of Snider. You will remember that we have a lease on the middle half of this lot. He wishes to build a cottage and start a little farm. It so happens that the place he has selected is about where one of the attraction areas we found is located. Ranzer and I visited this place this fall and we came to the conclusion that the place is extremely uncertain as far as its mineral value is concerned. Still, of course there is a chance that it will prove up good. I explained to the man the circumstances. He would like however to get the surface rights and I said I would refer the matter to you. I suggested that the company might rent him the land for a nominal price for say five years. Still I think at present it would not be advisable to give up the land and I would like you to confirm me in this and I will so report to him.

Yours sincerely,



Don't sell or lease



J. M. L.
THOS. A. EDISON,
President.

W. S. MALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont., Jan. 26, 1904.

Mr. J. F. Randolph,
Orange N. J.

Dear Sir:

Enclosed I send you the accounts for the month of December '03 for the Mining Exploration Co., and the Edison Storage Battery Co. together with the vouchers for same. Also two vouchers for the month of November.

Following is an estimate of the payments due Feb. 15 for which I would like to receive a check.

Drilling 340' by Rat Portage D. D. Co., at \$3.25 per foot	\$1105.00
Pay roll. Opdyke	75.00
Setter	130.00
2 Runners	137.50
2 Firemen	87.50
Cook	50.00
Teamster	15.40
Fire wood at 1.00 per cord	75.00
Balance of salary for self. Nov. Dec. Jan.	200.00
Hardware etc.	100.00
Groceries etc.	50.00
Sundries	200.00
	<u>\$2225.40</u>

I would call your attention to the fact that there are several payments due the Government on different properties here as you have a list of them, or at least someone down there has. Although these pay-

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President.

J. P. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Sudbury, Ont.,.....

ments are due I hardly think it is necessary to pay them as the Department seem to hold property for the leasor if some money has been paid in and doubtless would give us notification if anyone else was trying to get the lands. I have written this to Mr. Edison before. You might call his attention to the fact that these payments are due and also explain matters.

Yours truly,



REPORT OF MINING WORK IN THE SUDBURY DISTRICT, ONT. FEBRUARY 13, 1904.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

The work for the past week is as follows:-

Company Drill.

On Monday evening last the drill completed hole #9, depth 163' 8". No ore or mineralized rock was encountered except that formerly reported, namely at 121'-122'.

Considering that holes #7 and #9 were on the western edge of the mineralized zone struck in holes #3 and #6, as the mineralization was considerably less, and believing that it would be better to thoroughly test to the north of the small rise where the stripping was done, before moving the drill to the south of the rise, the drill was moved to hole #11, located on line #27, west of zero, and 16' north of the base line. The hole was inclined at 45 degrees, so that if we did not encounter the mineralized zone we could continue the hole with a small amount of drilling, under the small rise and supposed strike of the ore.

In this hole #11 we struck well mineralized rock between 35' 4" and 42' 8" and at 39' 10" about one half inch of solid ore, seemingly pyrrhotite. A piece of the ore at this depth, containing about half of this ore is being sent you.

As we struck mineralized rock much above the line of that in holes #3 and #6 I think it well to continue the hole a little farther to see whether or not we will strike the mineralized rock of #3 and #6. If we do not encounter it, a vertical hole from the same set up will probably be tried.

(2)

From the work so far done it might be that the strike of the ore is not as first supposed, i. e. parallel with the base line, but at an angle to it, in a line running about through shaft #I and the top of hole #II, which would about correspond to the stain and gossan we uncovered by test pits last spring. However the small seam of ore in shaft #I and the mineralized rock on the surface near this shaft, disclosed by a few shots, would lead one to think that the strike of the ore is parallel to the base line. The next hole, that is the vertical one from the present set up should give us considerably more light on the subject.

A map showing the plan and sections of the holes in this vicinity will be sent you, which will give you a clearer idea of the work.

Rat Portage Diamond Drill Co. Drill.

This afternoon the depth of hole #10 is 151' 10". The schist rock encountered in the former holes was found here between 128' 6" and 134'. It was fairly well mineralized with pyrites but contained no solid ore as in hole #8. The rock below this has been granitic norite. Unless there are much better indications of ore I think it will not be worth while continuing the hole to 200' and accordingly will stop it at the completion of the contracted 800', which ought to be reached Monday.

Between 122' and 122' 2" diorite, somewhat schistose, was met with. It is the first rock of the kind we have encountered and not having struck it in any body nor in the other holes I hardly think it of much importance.

General.

We have been carrying on the survey with the horizontal needle as fast as possible but the progress is slow owing to the deep snow

(3)

and the interference of other duties.

An attempt was made to pan the samples from holes #8 and #10 but the results were very unsatisfactory. The different iron minerals can hardly be distinguished from some of the rock in panning and there is considerable loss in consequence so that the concentrate is by no means accurate. Then we have no means to separate the pyrrhotite or nickel bearing ore from the magnetite, etc. I should think it much better, more accurate and safer to have analyses made of the samples of the core and accordingly I am sending you these cores from holes #8 and #10 divided into fifty foot samples. I shall continue the panning tests also and try for better results.

I ~~have~~^{have} received from the Rat Portage Diamond Drill Co. prices on the boiler and pump now being used in Blezard. They will sell the boiler for \$250 and the pump for \$75. The boiler would do for holes of 600 or 700 feet but would be too small for the full capacity of the drill. The pump would be O. K.

We have repaired our original pump, having gotten some new parts, and it now works fairly well and perhaps will do us for some time. Perhaps for the present therefore it would be well not to purchase new boiler and pump, especially as long as we are in Blezard and can easily move. We can doubtless get good prices later on the boiler and pump from the drill people.

Mr. Wilmott, formerly manager of mines for the Clergue syndicate, mentioned to me that the Sultana Mine could be purchased at what he thought to be a reasonable price, namely \$90,000. Under his management the mine was prospected with a diamond drill for the Clergues and he should be well acquainted with the property. He says that the above figure would include a considerable amount of machinery now on the property. He also thinks that he might get you a still better

(4)

figure than the above, giving you a free working option. He would give you all the information he already has relative to the property.

Yours sincerely,



P. S.

Relative to the mineralized rock and ore in hole #II I might add that they are very magnetic causing the needle to follow completely around the dial in some cases.

THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company of New Jersey.

Recd 2/25/04
Sudbury, Ont., Feb. 10, 1904.

Mr. T. A. Edison,
Orange, N. J.

*You may buy the horse as long as
you could sell it again for \$50.00
I have no chemist now & can't test samples*

Dear Mr. Edison:- *AS*

I have a chance to buy the horse that the Rat Portage people have been using in connection with their drilling in Blezard and as we undoubtedly have to do a great amount of teaming to get water and wood and as the horse is a good one for the work and we know what it is I think it would be advisable for us to buy it. They will sell it for \$100.00. Remembering your statement that you would rather not buy horses I am writing to you to get your consent. We are now renting a horse for fifty cents a day but just how long we can have the horse is quite doubtful and it is very hard to get a horse at this figure. The Rat Portage people do not want to rent it to us as they want to sell at once and get their money back as the horse was bought just for our work. Kindly let me know by return mail or as soon as possible whether or not I can buy the horse at the above figure.

I am sending you by express today fifty foot samples of the core from hole #1 in Blezard for analysis, to compare with the samples of holes #8 and #10 which I sent you the other day.

Yours truly,

J. Miller

Malloy

REPORT OF MINING WORK IN THE SUDBURY DISTRICT, ONT. FEB. 22, 1904.

file

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

The work for the past week is as follows:----

Company Drill.

Hole #II was drilled to a depth of 110' 2" and as the rock was no longer mineralized it was decided to discontinue the hole for the present at least. The drill was changed to an angle of 71 degrees with the idea of following up closely the small streak of mineralized rock and ore. This hole is numbered I2, and in it we struck mineralized rock between 31' 4" and 43' 5 1/2" and almost mixed ore between 38' 7" and 41' 2". The sludge turned black two or three times in this distance which would indicate ore, but some foot or more of the core was lost and no solid ore was recovered. The hole was continued to a depth of 56' 3" when the drill was again changed to hole #I3 which is at an angle of 70 degrees but has a direction away from the base line or 33 degrees N of W. This will cover a distance along the dip of the mineralized rock of some 50' and we should hit this rock at a depth of 40'. It would seem that we were near some ore body and that we are on the right track.

Rat Portage Diamond Drill Co. Drill.

This drill completed the 800' contracted for on Tuesday last and as the rock showed no indications of mineral and was the same as we have had in all the other holes the hole was abandoned at a depth of 172'. The crew has packed the outfit and left camp.

Today I have made a settlement with the drill Co. relative to their

(2)

extra expenses in moving the plant from Graham to Elezard, as we had
agreed to do.

Yours sincerely,

J. M. Miller

London, Ont., February 27th, 1904.

Thos. A. Edison, Esq.,

Orange, N. J. U. S. A.

Dear Sir,

I am now ready to have your men at Sudbury, examine the nickel bearing property mentioned in my letter of December 16th, 1903.

The principal property and the one I wish you to particularly examine is Lot 3 in the 4th concession of the township of McKim, in the District of Nipissing, 320 acres. The Canadian Pacific railroad passes within a quarter of a mile from the southern end of the lot. It is about five miles from the works of the Copper Cliff Co., and about one and a half miles easterly from Sudbury. The locations were examined in 1891 by 'Mr. R. H. Ahn, whose report including the assays made by Mr. Heys, of Toronto, reads as follows,

"The location of the mineral deposit as shown by surface indication and work already done is most promising, there having been brought to light the existence of what is evidently a rich vein of ore, in several places of solid nickeliferous pyrotite, which assays 1.96% nickel and 0.37% in copper, and these indications are such as to warrant a full development of the property"

Development work has been done upon these properties to the amount of over one thousand dollars.

T.A.E.

He further says "Your shaft No.1 is well placed, being sunk right on the vein, and though but a few feet deep, has brought to light good samples of ore. This vein occurs for the most part in a good coarse grained diorite of a most promising nature.

Shaft No.2 is sunk in a small quartz vein, which contains an abundance of Chalcopyrite and iron pyrites, which upon assay shows - Copper 3.22%; Gold \$1.00 and Silver 17 cents, to the ton.

There is an ample supply of both wood and water on your property for all mining purposes.

There is shown also a good wagon road from Sudbury to within a few hundred feet of the mineral"

If this property should suit you, kindly let me know within a reasonable time and we no doubt can arrange a sale of the same,

Yours truly,

J. G. Knight,

*#662 King St.
London,
Ontario,*

J. P. Miller
THOS. A. EDISON,
President.

W. S. HALLORY,
Vice-President.

J. F. RANDOLPH,
Secretary and Treasurer.

Mining Exploration Company
of New Jersey.

Sudbury, Ont., Moh. 7, 1904.

Mr. J. F. Randolph,
Orange, N.J.

Dear Sir:-

I am sending under separate cover a report and maps to Mr. Edison which you can forward to him if he left such instructions. I would like very much to get his opinion on a few points but thinking that he might have left definite instructions not to bother him I will send the report to the laboratory first.

Yours sincerely,

J. P. Miller

*Sent to Florida
Sometime*

MINING WORK IN THE SUDBURY DISTRICT, ONT. MARCH 7, 1904.

Mr. T. A. Edison,
Orange, N. J.

Dear Mr. Edison:-

The progress of the work since the last report is as follows and is shown by the accompanying blue prints.

Hole #13 was drilled to a depth of 116' and the rock encountered is as follows:

Surface to 32'9"	Horite.
32'9" " 34'3"	" mixed with quartz and feldspar.
34'3" " 37'6"	" " " " "
37'6" " 38'3"	" " " " "
38'3" " 116'	" " " " "
56'8" " 72'6"	" slightly mineralized.
79'6" " 81'11"	" highly mineralized and magnetic.
100'6" " 102'7"	" mineralized.

Upon the completion of hole #13 it was decided to make one more effort to locate again in this section the small patch of solid ore we hit in hole #11. In case we should wish to sink a test pit to this mineralized zone the location of it as near the surface as possible would be desirable. For these reasons a hole at a dip of 21 degrees is being drilled southward along this section. Desiring to prove whether there was a lead running parallel to the base line from shaft #1 along the ridge this hole is being continued to a depth of about 200' in a place of hole #13 as suggested in a former report. The rock encountered in this hole so far is as follows....

Surface to 13'24"

Horite mixed with quartz and feldspar.

(2)

13'2" to	13'10"	Norite mixed with quartz and feldspar.
13'10"	to 31'6"	"
31'6"	" 33'8"	" " " " " "
33'8"	" 36'9"	"
36'9"	" 36'10"	" well mineralized.
36'10"	" 40'6"	"
40'6"	" 42'5"	" slightly mineralized.
42'5"	" 43'5"	" highly mineralized and magnetic.
43'5"	" 44'9"	" slightly mineralized.
44'9"	" 45'8"	" highly mineralized and magnetic.
45'8"	" 54'10"	" slightly mineralized.
54'10"	" 58'6"	"
58'6"	" 60'6"	" mixed with quartz and feldspar.
60'6"	" 85'5"	"
85'5"	" 87'2"	" " " " " "
87'2"	" 88'3"	"
88'3"	" 101'8"	" " " " " "
101'8"	" 110'	"

Projecting the line of mineralized rock encountered in holes VII, 12, 13 and 14 we located on the surface the place where this zone should come. We dug a small pit at this point and uncovered stained rock and gossan and chipped off some pieces of mineralized rock. No ore or mixed ore was found. The rock was somewhat like a decomposed gabbro, and somewhat the same as we uncovered in the line of test pits which were put down last summer across the high attraction about West from the present set up.

In none of the holes since #11 has solid ore been drawn up although

(3)

the sludge has been black quite often. It would appear therefore that there is only a small and irregular zone of mineralized and magnetic rock dipping to the northwest. The strike of this zone has not been located definitely as the mineral in section "M" is considerably different than that in section "N". In order to prove with little cost this strike I think a hole could be drilled from the present setup at an angle of about 45 degrees to section N; which would be about at right angles to the strike as at present considered. A hole 50 or 75 feet deep would be sufficient.

If we cannot locate anything better or more encouraging in hole #14, nor in the hole just proposed, nor in that to the south of the small ridge and dipping to the north, which you laid out I think we had better return to the main body of attraction and continue the line of hole begun by the contractor, perhaps skipping the two middle holes and in their place putting one hole close to the eastern end of the bright yellow area and another some 400' south of hole #8 or the first one drilled by the contractor, along the same section.

Hole #8 is the most mineralized as judged by the eye or any of those on the main attraction and it might be that another hole to the south would be successful. Still I think that the bright yellow attraction could hardly be caused by a body of ore so far away. The mineral in this hole #8 was not pyrrhotite as reported, it is more pyrites which is not at all or very slightly magnetic so that this mineralization may mean nothing as far as our attraction is concerned.

It seems more probable to me that there is a chute of ore or mineralized rock coming close to the surface either immediately under the bright yellow attraction or a little south of it, which chute has a decided pitch to the north and dip to the northwest. If the ore is so located it might be that our hole #1, 2, 3, and 4 are too far to the west

(4)

On the magnetic survey map I have indicated the bright yellow attraction area and the supposed ore body also the different holes which I will refer to later.

If the ore body should be in this position holes such as X and Y might be best instead of those along the section "G". Perhaps however you would rather have us continue to follow up the mineralized zone we picked up in holes about the surface showing. We could probably follow it some distance farther north east by putting a series of holes either in fan shape or across a section about half way between the present location and the first holes drilled on the bright yellow attraction.

Still it would seem that if there was any large body of ore about this surface showing we should have hit it by this time. Will you kindly advise me therefore on the following points...

(1) Shall we abandon the vicinity of the surface showing and return to the bright yellow attraction area?

(2) Shall we continue in the present vicinity and sink a hole at 45 degrees to the section "H", then the hole you laid out to the south of the ridge and if no good body of ore is encountered return to the main attraction?

(3) Shall we sink the holes as stated in #2 and then try a section midway between the present set up and the main attraction?

(4) If we move to the main attraction shall we sink the holes 200' along the section you located or put one hole some 200' or 400' south of hole #8, and one near the eastern end of the "bright yellow", in place of #3 and #4.

(5) Or shall we put in holes

I enclose the map of the survey by the horizontal needle as far as completed. Line 28 west of zero was run in advance to give you an

(5)

idea of the survey in the vicinity of the surface showing. You will notice that the magnetic disturbances occur about where we get the deflections by the dip needle.

Yours sincerely,

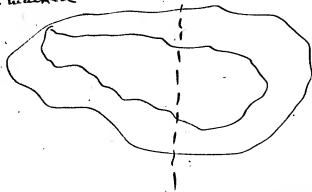
A handwritten signature in cursive script, appearing to read "J. Miller".

P.S. The phonograph has just been received and
is all O.K. Many thanks.

Feb 16 1904

John -

I think you better return to the main body and drill the line of holes we marked.



We can drill each 200 ft + then when the ones marked are drilled we can drill between each hole thus doubling the holes in one line - then if we get within we can deepen the holes 200 ft more + thus we are bound to find it if we go deep enough

By a great number of holes in one line the line long and holes deep we are bound to spot it - if we cant then its no use to open any more money

Edison

Report of Mining Work in Buckley Dist. Ont. March - 20, 1904.

Mr. Thomas A. Edson,
Orange, N. J.

Dear Mr. Edson: —

Since the last report holes #14 and #15 have been completed. Hole #14 located as reported, Hole #15 being located at the same set up but the line of hole is at 45° to that of #11, 12, 13 & 14. The embedded blue prints will show clearly the location & rock encountered.

In Hole #15 no solid ore, as in #11, was encountered and the mineralization was not as much, nor the magnetization, however that mineralized rock was encountered must be of the same run as that in #11. As no solid ore was met with however the strike cannot be plotted with any accuracy.

Upon the completion of Hole #15 the drill was moved to #16, which is on the south side of the small ridge & at about the place you designated. The hole will be drilled at about 35° and will pass under the ridge as far as Shaft #4.

Upon consideration of the results of this work as far carried on here it hardly seems as though there could be a body of solid ore in this vicinity (within three or four hundred feet of the surface). Surely if the attraction is due to solid ore we should have encountered it in one of the holes drilled about the surface.

(2)

showing, where the readings by the dip needle are the highest and where there is the only stain, or surface shown. Whether further work in this vicinity would prove more successful or not is a great question and I am almost of the opinion that it will not. Of course we have not struck anything which would give us a clue to the attraction about the main area of "bright yellow", but still where we have had highest readings surface indications we have found practically nothing.

I would like to have your immediate advice on the subject and if you want the drilling to continue kindly advise as to the location of the hole as nearly as possible, according to my last report. Perhaps the line of holes you laid out would be as likely as any.

I enclose the map of the horizontal needle survey completed to the east of you and covering the main area of "bright yellow."

Yours sincerely
J. H. Miller

P.S. I enclose also the Expense sheets for
Holes # 11, # 12, # 13 and # 14.

[ENCLOSURE]

7/64 - 7/164		Hole #11 -		Total depth - 110' 3"		Stand pipe above rock - 2' 9"	
Labor		Time	Setter	Rammer	Trimmer	Total	Cost p. ft.
Mining drill from Hdw #10	1 day	4.37	4.775	1.25		\$ 10.40	
Setting up drill -	1.3 "	5.69	9.82	1.63		15.14	
Drilling	1 1/2 hrs	20.56	24.177	12.450		57.25	
						\$ 82.89	.752
Teaming							
Hauling water & wood -	Teamster -	7.3 days @ 35¢ p. m.				8.83	
	Horse hire	7.3 " @ 50¢ p. day				3.65	
	" feed	7.3 " @ 35¢ "				2.41	
						\$ 14.89	.135
Fuel							
Wood -	Cutting @ 1¢ p. pack -	Packs -				9.00	
Doc Martin	Exp 9 " 5.65 cords @ 50¢ p. cord -					2.82	
						\$ 11.82	.107
Drainage -							
#1 Edison & Duncan -	@ 50¢ p. ft. Lvs 3/4 kts.					7.03	
#2 Hanger - Lippert	@ 50¢ " " 3/4 "					31.99	
#4 Edison	@ 52¢ " " 1 1/4 "					8.12	
						\$ 47.14	.427
Board							
Groceries etc.	181 meals @ 12¢ p. meal	Edimile				22.50	
Cook -						8.14	
						\$ 30.64	.280
Sundries - All, breakage, wood & camp etc.							
						.20	
						\$ 1.901	

[ENCLOSURE]

7/1/64 - 7/20/64

Hole #12

Total depths - 56' 3"

Stand paper above rock - 2' 9"

Labor

Drilling -

Time	Setup	Running	Transition	Total Cost	Cost / ft.
5.9 shifts	12.56	14.31	8.38	\$34.25	.608

Teaming Hauling Wood rotation -

1 Cammer - 2.9 days @ 30th p month -

3.51

Horse hire - " @ 50th day

1.45

" feed - " @ 30th "

.26

\$ 5.92 .105

Fuel -

Wood - Cutting @ 1st p rack - 4 1/2 racks

4.50

Due Martin Log 4 1/2 = 2.8 cords @ 50th cd.

1.40

\$ 5.70 .105

Diamonds

Bit #1 - Elvian & Duman @ 50th less 1/4 ltr.

7.71

" #3 Janger - 4.00 @ 50th " 1/4 "

8.23

" #4 Balson @ 50th " 1/4 "

8.13

\$ 24.17 .430

Board

Groceries etc. 69 meals @ 126 p meal return

8.614

Cook

5.000

\$ 13.694 .243

Sundries - Oil, breakage etc

.20

1.691

[ENCLOSURE]

Hole #13.	Total depth - 116'				Casing pipe about 100' - 3' 6"	
Subur	Time.	Setter	Running	Trimming	Total Cost	Cost p. ft.
Setting up derrick	1 day	1.75	.80	.50	2.06	
Drilling	1 1/2 Mts	22.51	27.32	14.00	63.83	
					\$65.89	\$.568
Teaming Hauling water & wood.						
Teamster -	66 days @ 35¢ p. month -				7.77	
Horse hire	" @ 50¢ " day				3.20	
" feed	" @ 33¢ " "				2.18	
					\$13.15	.116
Fuel.						
Food -	Cutting @ 1 st pack - 11 sacks delivered.				11.00	
Dr. Martin -	1/2 of 11 = 6.875 sacks @ 50¢/sack.				3.44	
					\$14.44	.125
Diamonds						
Bit #1 - Edison & Dawson -	See 1/2 @ \$50.00 p. kt.				11.40	
" #3 - Yampier -	" 1/2 @ 58.75 "				70.38	
" #4 - Edison	" 5 3/4 @ 58.75 "				43.06	
Note - 2 of the stones were very small & began to break up.					\$157.84	1.334
Board						
Groceries etc.	154 meals @ 1.26/p. person.				19.404	
Cook -					11.256	
					\$30.66	.265
Sundries						
Oil, breakage, mail at camp etc.	Estimated.				.20	
					\$2.608	

[ENCLOSURE]

Hole #14		Total depth - 307' 10"				
		Casing pipe above hole - 4' 7"				
Factor	Time	Setter	Runner	Turner	Total Cost	Cost per ft.
Setting up derrick	1 day	1.73	1.10	.50	3.33	
Drilling	11.1 "	11.06	53.52	27.63	122.21	
Repairs	1 "		2.09		2.09	
					\$124.63	\$.648
Teaming - Hauling water & wood.						
Teamster -	13 1/2 days	@ 35.71 per month			15.50	
Hour time	"	@ 30¢ " day			5.75	
" feed	"	@ 33¢ " "			4.45	
					\$25.70	1.34
Fuel						
Food - Cutting @ 1.00 per sack & drawing fuel may					27.30	
from savings & storage pile - 30¢ per sack & sack					6.56	
Dick Martin Fuel = 13.125 cords @ 50¢ per cd.					\$33.86	1.63
Diamonds						
Set #3 - Jumper - Lapor - Loro 3/4 @ 58.00 per pkt.					52.27	
" #4 Edison " 1 1/4 @ 52.75 "					37.37	
" #5 Edison, Diamond, Banger " 5 1/4 @ 55.00 " Ave.					71.80	
Note: Set #1 the same, but not on the list, set of Diamond & the two ones from Banger made into #5.					151.74	1.65
Board						
Provisions etc. 317 meals @ 12¢ per meal. Extra.					39.94	
Cook					22.07	
					\$62.01	.899
Sandwiches - Oil etc.						
					2.00	
					\$64.01	

Tort Stuehl B.C. March 21 1904

Thomas Edison Esq.

Dear Sir

I sent you by Express about the 27 of January
12" of nickel ore tin lbs was the ore from the
head and two" was of a ledge next to the head
I also wrote explaining the matter. I trust you
got the letter and Express parcel all right. you said
in your last letter to come that you were
going to try an electrolytic process on the ore and we
are anxious to know what success you had with
it if you perfected the electrolytic method would
you kindly let us know what was the result
we are anxious to have this property developed
this season and if you think well of the property
and would like to buy same you could have
it operated by some competent nickel man
and there will be no trouble to make terms
with us as hoping to hear from you soon
I remain
Yours Respy V.C. Armstrong

The Oxford Copper Company.

COPPER AND NICKEL ORES, MATTES, BULLION, ETC.
GENERAL OFFICES, 78 BROADWAY, NEW YORK, WORKS AT CONSTABLE HOOK, N. J.
CABLE ADDRESS "QUEBATH" NEW YORK.
43 EXCHANGE PLACE

SAMUEL A. BENNETT,
President.

New York
APR 11 1904

March 24, 1904.

No. 15

Mr. THOMAS A. EDISON,
Edison Storage Battery Co.,
Orange, N. J.

*All right go ahead
Edison*

Dear Sir:

The President of our Canadian company at Copper Cliff, Ontario, Mr. A. P. Turner, wants to build himself a little country house within a short distance of Copper Cliff, and he has set his heart on a piece of ground that has been leased to you by the Canadian Government. I understand the property was taken up by Mr. Miller, your brother-in-law, and that your lease is a mining lease, but by making application to the Canadian Government for a deed and paying about \$3.00 an acre, title can be secured to the property. The lot in question is known as S $\frac{1}{2}$ of the N $\frac{1}{2}$ of Lot 5, in the Concession of Snider Township, and contains 80 acres. Mr. Turner would like to pay for the patent of this lot from the Government, the patent to remain in your name, and Mr. Turner will see that no expense is incurred by you in taking out this patent. In return he would like you to give him a deed to the surface rights, it being made a part of the transaction that you or your representative can go on the lot at any time to mine and prospect, and that Mr. Turner would surrender whatever land was necessary for the carrying on of your mining operations. If you see your way clear to comply with Mr. Turner's ideas, I shall certainly esteem it a great favor. The reason he wishes to have the use of this particular piece of property is that there is a very pretty lake on it, and he would like to put up his

T.E. -2-

shuck on the banks of this little lake.

If you will kindly let me hear from you on the subject, I shall
be very much obliged indeed.

Yours very sincerely,

W. H. H.
President.

SAB/G

Sault Ste Marie, Ont., April 5th, 1904.

Mr. Thomas A. Edison,
Orange, N.J.

Dear Sir:-

Are you in the market for a nickel mine? I can offer
you, for a short time, the Strathcona nickel mine, situated about
20 miles from Sudbury, Ontario. This mine is probably the
largest and richest nickel mine in the Sudbury District, excepting
only, perhaps, the famous Creighton mine.

This mine was bought by the Lake Superior Power Company last
summer but, when it failed in the fall, the option lapsed and it
fell into the hands of the present owners.

I enclose herewith copies of description of this property by
Mr. E. A. Sjöstedt, Chief Metallurgist of the Lake Superior Power Co.
and by his assistant Mr. R. H. Aikin.

Yours truly,

Charles H. Aikin.

*John Miller - If you
have time you might go
or investigate this mine
take your needles
person*

J. P. RANDOLPH,
Secretary and Treasurer

Mining Exploration Company
of New Jersey.

Sudbury, Ont., May 2, 1904.

Mr. J. F. Randolph,
Orange, N. J.

Dear Sir:-

I have taken up the matter of transferring the surface rights of our claim in the Township of Snider, Lot 5, Con. 1 to A. F. Turner of the Canadian Copper Co., according to a letter received from Mr. Mallory. As there seems to be little interference with our rights on a part of the lot I would like to see the transfer that was made to us by S. Johnson of Sudbury relative to his claims on the west half of the lot. Will you kindly send me this transfer. It is among the transfers and leases I gave you sometime ago and which you deposited in your safe.

Will you kindly also examine the deed for the land we purchased in Connecticut from the Graniss family and known as the Johnson property and which deed you hold and see whether or not it states that the timber on the property will be reserved to the Graniss family. I have received an offer for the fire wood from a party but am under the impression that there is a clause in the deed covering this.

The Grannis family have also asked whether or not Mr. Edison wants to sell this property. Will you kindly asked him whether he wants to sell the land and the mineral, or just the land, or let the matter stand as it is for the present. If he wants to sell any part of the property please have him state what figure he wants for each part.

Hoping to soon have a reply, I remain,

Yours truly

Sudbury, Ont., May 10, 1904.

Thomas A. Edison:

Letter of 3rd received. The five original 200 ft. holes completed. Hole 19, 270 deep. Norite continues to bottom. Awaiting your instructions.

J. V. Miller.

Better stop ~~and~~ return drill 327 ft up
and return to Orange, expect to
continue drilling at future period
Edison

D
904
Ore Milling

Sudbury Ont.
5-11-04

J. A. Edison, -

Will you not try places we
have partly worked in Morgan and Falcon
bridge before giving up drill, think a few
holes advisable.

signed

J. V. Miller

Don't want do anything further
this summer - Σ

*Arthur Moody to
11/26/04
McLellan*

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

WASHINGTON, D. C., October 19, 1904.

Mr. Thomas E. Edison,
Orange,
New Jersey.

McLellan

Write for samples

2

Dear Sir:

Sometime ago, at the Buffalo Exposition, you authorized me to investigate for you, whenever the opportunity came up, the question of the supply of nickel for your nickel batteries. I have done much investigation in this line, although it was not necessary to draw to any considerable extent upon the fund which

you placed at my disposal for your purpose. The result of my investigation was that you would do best to consider carefully the nickel to be found in the natural alloy of iron and nickel in the neighborhood of Kerby, Oregon, and also the new deposit found by myself (of the same character, but perhaps considerably larger) in the neighborhood of Murphy's Ranch, on the south fork of Smith River, Del Norte County, California. I am now able to advise you that there are people developing the property, of which you had first chance, and have now for sale a considerable quantity of high grade concentrates of iron and nickel. These you can obtain by addressing Messrs. H. E. Wood & Co., 1734 Arapahoe Street, Denver, Colorado.

Yours very truly,

David W. Day
Chief of Division.

**Mining Exploration Company of New Jersey and Related Records
Thomas A. Edison Files - Correspondence (1905)**

This folder contains correspondence and other documents relating to nickel- and cobalt-bearing properties in the Sudbury district of Ontario. The documents concern mining properties, including options on the Darby Mine; the transmittal of ore samples; and the purchase of ores. Most of the letters are by Horace M. Wilson, mining scout and manager of the Darby Mine. Also included is correspondence from the Toronto law firm of Denton, Dunn & Boulton, along with a few items by John V. Miller and Walter S. Mallory.

Approximately 30 percent of the documents have been selected. The unselected material includes additional letters, news clippings, and pamphlets from Wilson; and letters of reference or inquiry.

New Bedford, Ont. May 17.05.

Dear Mr. Edwin —

I arrived here on Friday night about 9 o'clock after an all day ride from the New Toronto & Northern Ontario Railroad, which is good in its ~~way~~ but Oh what a way. We covered the distance of 113 miles in ten hours and a half. Every other day, that is Monday, Wednesday and Friday they run a solid passenger train and on the other days there is a mixed train. I must add however although the road bed is pretty bad and the travelling is very slow, the fare is comparatively cheap with the car very good, in fact about new & up to date.

The general character of the country appears to be about the same as around Sudbury with the exception of considerable more timber here. However I should judge the "timbering" through the West would be easier than around Sudbury as the timber appears to be much clearer. The country is generally hilly but the rock is pretty much covered by moss, grass etc.

yesterday I spent in Cobalt visiting some of the properties. It appears that only two have been worked to any great extent. These are the Trechway and Fleming mines, the first one discovered. At the latter they have a steam hoist, air compressor & rock house and are planning on putting in a crushing plant. It is quite a business like.

At the Trechway mine there is a steam hoist but it is operated in a crude way. I was told that they were more or less only prospecting with the idea that when they were fully satisfied with what they had they would put in a good outfit.

On the other properties there are no steam hoists. They are raising the ore by hand.

The veins are quite narrow running from eight to ten inches down to an inch or so. At the Fleming & Trechway mine there is not one solid vein but they are working several streaks or shaggers more or less close together. At the Fleming mine

there is three feet or more, at some places between the strungers. The intervening rock is somewhat mineralized particularly along the cracks or seams and especially with silver. The walls however appear to be quite sharply defined and I could find scarcely any mineralization in several samples I examined. This talking with a few prospector I should judge that the country rock is not mineralized in itself but occasionally they find very small seams or veins showing evidence of minerals.

I should judge that prospecting here is extremely difficult because the rock is pretty much covered by moss or luff and the seams or stringers are so small that they might easily be passed over.

Went to see the mining recorder who has charge of the mining claims but was disappointed as he was out for the bush - I will see him however tomorrow. Incidentally I saw a map of the township of Coleman brought up

to date. ~~the~~ The land within a radius of three miles of Cobalt Lake is practically all taken up. There are probably close to 200 persons in the vicinity, most of whom are keeping close to the present timber land as they are going off some 10 or 15 miles.

There are good properties or parties which stand preeminent. They are all within a half mile of the lake and are as follows:

Thurterray Mine - T.B. 7

La Rose Mine - T.S. 14 For the Timmins Mine

McKinley & Darragh Mine - T.B. 1

E.P. Earls of New York - R.L. 404.401 section.

This Earls is from New York and represents I believe the Reprising Mining Co. which I suppose is the Canadian Copper Co. or as spoken of here by a few as the Standard Ore Co. He holds several hundred acres near the lake and they are supposed to have very valuable finds and to have shipped from one or two of them the most

ore. These properties Earl has bought from
proprietors.

I will be able to tell you more about
the owners & addresses of owners after I see
the Mining agent.

As to the shipment of ore - all the ore
as far as I can so far find out, is shipped
in sacks after having been coaled in bulk,
to E.P. Earl at New York or Jersey City. I
believe he has no regular contracts with the
miners but he has first on the ground & has
"treated us well and there has been no reason
to ship to anyone else," as one of the representa-
tives of the McKinley & Carnegie Mine expressed
it.

All seem to think that the ore is taken to
Jersey, some saying that it is treated there, others
that it is simply being stored. Some seem
to think it goes to Germany or any other place.
One party told me that they found it had to
ship a car of 30 tons to New York. This

(6)

I have not as yet been able to verify from
the freight agent
gathered from one miner that they get
from 60 to 65 cents a pound for Vicks cobalt
and 10 to 15 cents for the metal. Prof.
Miller in Toronto told me again that the prices
were the same as those shown on his map
of the district which you have.
I will be here until Wednesday when I go
to Parry Sound. Will write you fully from
there.

Yours sincerely
J. Miller

Nickel Search -
J. V. Miller

Telegram Collect.

Parry Sound, Ont., June 2, 1905.

Thomas A. Edison:

Copper nickel prospects at Loring sixty miles away, take
week to make trip. Shall I make, answer immediately.

J. V. Miller.

yes. Edison

Nickel - Mine

DONALD MACDONALD,
WHOLESALE AND RETAIL LUMBER,

74-80 BEARD STREET,
ERIE BASIN.

OAK AND SHIP LUMBER SPECIALISTS.

TELEPHONE, 822 HAMILTON.

Assessment
July 17, 1906.

BROOKLYN, N. Y.

July 12th 1906

Thomas A. Edison Esq
Sewall Park
East Orange N.J.

Where is the Nickel
property near
Washington Union

Dear Sir

I have personally
visited that region &

and have just returned from Canada
and have two valuable properties intrusted
to me to sell, one of which is a developed
Nickel mine situated a short distance
from the celebrated Worthington mine
at Saultury with a railroad running
through the property. The Copper property
is situated in the Parry Sound district

DONALD MACDONALD,

TELEPHONE, 822 HAMILTON.

WHOLESALE AND RETAIL LUMBER,

74-80 BEARD STREET,
ERIE BASIN.

OAK AND SHIP LUMBER SPECIALISTS.

2

BROOKLYN, N. Y.

1906

and undeveloped, but so conveniently
situated to the water front, that the ore
can be loaded on to a barge with
practically one handling. Neither
of these properties have been offered
for sale before, and should you feel
at all interested I shall be glad
to call on you with the reports re
Very truly yours
Donald Macdonald

Billed.

J. V. Miller

Albertus

July 26/05

Pa-

Telegraph your address,
want visit York County plenty
of stuff there in magnetite,

Thos a Edison

Collected

Mr. Union, Pa. July 26/05

Thomas A. Edison

I understood him to
say going to Altoona.

J. R. Mc Kury,
Mgr.

John V. Miller
at some Hotel Altoona
Pa

Telegraph your address
for next two days

Billed Edison

Nickel Property

Answered
Aug 3-1905

Sydenham, Ont. July 31st, 1905.

Thomas Edison Esq.

East Orange, N. Y.

Dear Sir:-

Say that I have a supply of nickel wound to me for several years - turned out to be good

It occurs to me that you might be willing to consider the merits of an investment in copper-nickel mining and smelting and refining in the Sudbury, Ontario, district. I have no interest in any ore property but am interested in a process for ~~mining~~ refining from the copper-nickel matte. However while I am not interested in ore properties I have an intimate knowledge of the properties which are available up there and if you are inclined to carefully examine into the advantages of copper-nickel as an investment I think I can be of material service to you. This process in which I am interested has been worked out and perfected by a trained nickel metallurgist. The so-called nickel processes which have failed to do the work claimed for them during the past few years are the work of those who have not had the opportunity to secure at first hand the detailed practical training in nickel which is necessary to make a success of a process. As you know nickel has just about doubled in consumption during the past five years and new uses insure a still greater consumption during the next few years. The International Nickel Co has made over a million dollars profit yearly, during each year since its organization some three years ago. The same results can be accomplished on a capitalization very much less than they are handicapped with. An investment of from a quarter of a million to a million and a half dollars, depending on the properties acquired and the extent of operations, can be made to return from forty to one hundred per cent. This is a large statement but investigation will prove its accuracy.

I may say for your information that I was for some years the Business Manager of The Canadian Copper Co. at Sudbury, Ont. and have an inside knowledge of all phases of the nickel business. And having this

T. Edison No. 2.

knowledge I can speak all the more emphatically as to the merits of an
investment in nickel. From the above company and from other reputable ^{sources} I can
furnish you such credentials as you may require.

We are willing to sell our process outright or to make arrangements
to have it used under a royalty arrangement. If I can be of further service
I would be pleased to make an appointment.

Yours truly

J. N. Glidden

SEP 19 AM 1

DENTON, DUNN & DOULTREE,
- BARRISTERS, SOLICITORS &
NATIONAL TRUST CHANGERS
20 KING ST E - TORONTO, CANADA.
FRANK DENTON, M.C. - ROBERT L. DUNN
WILLIAM DOULTREE

Toronto, Sept. 15, 1905.

Thomas A. Edison, *Esq.*,

Orange,

N. J.

Dear Sir,-

We are in receipt of your favor of the 7th inst. in which you say that the decision recently given was very disappointing to you and that your associates have now withdrawn their support as they fear politics here interfere with business and that you will therefore be compelled to sacrifice all that you have paid and abandon further attempts. We did not answer your letter promptly for the reason that we thought you were mistaken as to the question of politics interfering with business here and the writer decided to wait a few days so as to write you with more deliberation.

With regard to your recent contention on the Herman E. Dick claims in Morgan Township we think that while the Department would have been justified in giving a decision in your favor (and we think ought to have given the decision in your favor) yet it was a debateable question. You were certainly in default and the rival claimant was not in default but notwithstanding this I think the merits were undoubtedly

DENTON, DUNN & SOULTSBEE,
BARRISTERS, SOLICITORS &
NATIONAL TRUST CHANGERS
20 KING ST. E. TORONTO, CANADA.
FARMER & BEECHER
10, RUELLE ROYALE

with you. The Department had to give the decision one way or the other and I think it must have pained the Minister, the Honourable Mr. Cochrane, very much to give the decision against you for I have heard him express himself as highly pleased with your enterprise and particularly well pleased with your Mr. Miller. I think that Mr. Cochrane must have been influenced by the fact that he ought as far as possible to support his officials and the Director of the Bureau of Mines having made a mistake by giving the promise hurriedly to Mr. Beath showed his own weakness later on by using every effort that he could to have his first decision upheld. The writer is satisfied that the question of politics did not enter into this decision in the slightest degree.

The only case in which I think you could have the slightest reason for suggesting that politics interfered with you since you started developing in Ontario was the refusal to open up the Township of Trill and the neighboring townships a couple of years ago for general prospecting. The Government at that time had made promises to Mr. Clergue and I think Mr. Clergue had mesmerized it and the reason that these townships were not open for general prospecting was for the purpose of the government being in a position to implement the previous promises made to Mr. Clergue.

1111

-3-

DENTON, DUNN & SOULTBEE,
BARRISTERS, SOLICITORS &
NOTARIAL TRUST CHAPLAINS
20 KING ST. E. TORONTO, CANADA.
FRANK DENTON, Q.C., KENNETH L. DUNN,
W. MURDOCH SOULTBEE.

We think that we are as alive to the situation with regard to the Crown Lands Department of this province as any one could well be and we do not think that politics have at all at any time been directed in any shape or form against you. On the contrary we think that the Department of Crown Lands is very anxious to have you find nickle or any other valuable ore and have it developed to the fullest extent and would be pleased to aid you in any way in which it can to facilitate your efforts.

In conclusion let us say that if the only reason that you have for suggesting your withdrawing from further operations in this province is that you fear that political influences will work against you we have no hesitation in stating that you ought not to allow yourself to be influenced by such a reason or such a fear for we are satisfied the reason you give is absolutely foundationless.

We regret very much that the writer has not had the opportunity of meeting you to discuss various phases of the mining question and opportunities in this province. We think you have a foothold here that is recognized not only by the Department of Crown Lands but by the public.

Yours sincerely,

Denton Dunn & Soutbee

[ATTACHMENT]

SEP 19 Ans'd

2

My people cannot understand why in view of the custom in vogue of permitting delays in payments, even now recognized by the Dept. in their notice to all parties to come forward & pay up why we should be singled out for giving an object lesson, especially in view that the local guide employed by us ~~was the only one who should not be in a position by us to be~~ treacherous. Also in view of the fact that we were not like ordinary prospectors in respect to finding ore we relying entirely on the needle and diamond drilling to make our discoveries. I was in negotiation for a 2500 ft Diamond drill to do some deep drilling

at Blezzard ~~to see~~ where we put down a number of holes some 1000 ft deep & found nothing. It was our idea that this form of prospecting would be encouraged, and lulled into a sense of security by a custom long in vogue of deferred payment acquired in by the Dept. & which we resented in our prospecting we did not pay promptly because there was no evidence of ore except the needle in 9 out of 10 places & in the best place not 20 feet area of stained rock. I believe the Dept. in correct in stopping this abuse of deferred payments & tying up

[ATTACHMENT]

3

The land, but my people think
they have rec'd unjust treatment
in view of the custom in vogue
and they fear politics interferes
in Canada the same as ~~it~~ it does
in this country. — consequently within
some day I hope personally
to settle the question if there ~~are~~
~~is~~ or is not nickel deposits
away from the Contracts and
very deep down, ~~event~~
~~there would be no commercial~~
~~value~~

How many
are

Wilson

SEP 29 1905

Haileybury,
Ontario, Canada.
Sept. 24, 1905.

Mr. Thomas A. Edison,
West Orange, N. J.

Dear Sir,

You are doubtless looking for a letter from me, and although I have nothing very definite to write about I will post you as well as I can as to what I have accomplished the past three days.

I have put up here at the hotel at Haileybury, as the accommodations at Cobalt are very poor. I arrived Friday afternoon, and started in at once to make all the acquaintances possible, and to learn the general state of affairs here. It is slow work, for most of the men one meets are an ignorant set, and they all have different stories and make statements and give figures that widely vary. The intelligent set are hard to get much information out of. They are mining engineers, brokers, and

business men who are here looking over ²
the ground, and what they have found
out they are keeping to themselves.

However, I am gradually getting my bearings
and beginning to get hold of something
tangible.

Cobalt is like a wild & woolly western
mining camp. Many are living in tents, but
before winter sets in there will be probably
a hundred or more log cabins and rough
board houses erected.

The two largest mines that are now shipping
ore are the Timmins mine (J.S. 114, just
above Cobalt Lake on the line of the rail-
road) and the Irishewey properties (J.B. 647
in the town limits of Cobalt.)

The Timmins mine has, I understand, shipped
eight car loads of ore so far, and the ore
is very rich in silver. They have a shaft
90 ft. deep and the ore continues strong.
They employ some 60 to 80 men (average wages
\$2.00 per day and their food) and have a
first-class equipment. The property is valued

at \$5,000,000.

(3)

The Trethewey mine is putting in some heavy machinery. One shaft is some 30 ft. deep, and there is an open cut about 200 ft. long by 10 ft. wide. So far seven ledges have been uncovered with pay streaks running from an inch to 2 ft. in width, but they have sunk only 6 or 8 ft. on them up to the present time. On the dumps are several tons of rock strongly impregnated with cobalt bloom, while a few feet below the surface they encounter the rich silver and smallite ore. This property could not be had for less than \$2,000,000. This man, W. S. Trethewey, controls all the mining rights included in the present town-site of Cobalt.

Another large property, perhaps of greater value, is the Nipissing Mining Co., controlled by Earle. He has from 900 to 1200 acres, known as Cobalt Hill, on the east of Cobalt Lake (R.L. 401 and adjoining sections). In a big cutting on this property I saw yesterday a

12 inch vein of Smaltite running along the (4)
bottom of the cut for some 50 ft (30 ft. from
the surface). Other shafts have exposed rich
silver ore, and at another point on the
property they are shovelling up the mud
or mud along the bases of outcroppings, and
which carries a lot of silver. They are
shipping ore, but I have not yet been
able to find out how much.

Some say the ore from these mines goes
to New Jersey to be treated and others tell me
that brokers in New York take it all and
ship it direct to Germany. I shall endeavor
in a few days to find out definitely about
this. Nobody seems to know positively.

The above mentioned mines are all distinctively
silver properties, although Cobalt bloom and
smaltite are met with in most of the workings.

What is regarded as a strictly cobalt mine
is the property belonging to Prof. C. K. Leitch and
Prof. Van Hise of the University of Wisconsin, at
Maddison, Wis. This mine is in Lot 15, Concession 1
of Bucke, in the outcrop along the shore of Lake

(5)

Fernishamung. I heard of it yesterday through Dr. H. E. Barlow, one of the Dominion Geologists, whose acquaintance I was fortunate to make. I visited the mine this afternoon and there is certainly cobalt there all right. On the dumps surrounding two shafts, (one about 20 ft. deep, and the other some 40 ft.), are several tons of rock spotted with cobalt bloom, and in a pen near by they have sorted out some 3 or 4 tons of smallite. Along one side of one of the shafts was a vertical, decomposed vein of loose rock, 18 inches wide, and all stained with the bloom. The smallite vein must be at the bottom, but owing to water in the shaft I was unable to locate it, judging from the sizes of the sorted ore, however, it must be of some extent. I pocketed some samples off of the piles and shall forward them tomorrow by way of Boston, according to your instructions. You will notice that the ore has an extremely fine grain. It may not be a true smallite. The mine is well located and can be easily worked. Haileybury station is only about three

miles distant, and a wagon road can be easily
made from the mine to the country road, about
1/4 mile. A man named Warner represents
the owners here, but as he was away today,
I have not been able to get ^{the entire place was prospect.} further information.
By tests of the ore prove satisfactory, you will
probably communicate direct with Prop. Leith
and Van Hise.

I met today a gentleman named Archibald M.
Campbell, who was for nine years connected with
the Dominion Geol. Survey. He is referred to as
"the geologist" in an article entitled "Prospecting for
Silver" that appeared in the "Boston Transcript"
recently, and which I sent to you through Peck.

He is actively engaged here now for himself,
and tomorrow I am to accompany him to various
properties. He is an old friend of Drummond,
who is spoken of in the above-named article, and
whose mine has turned out to be of great value.
Campbell seems to be thoroughly posted, and has
got two matters now in hand that he has
offered me a chance in - as an investor from
Boston. They are both in the vicinity of Pease Lake,
south-east of the town of Cobalt, and surrounded
by such mines as the Violet, Buffalo, Drummond,

Hargrave, and other properties that are all (?) showing up big. The claim is not yet patented, as, according to the new law, no values in ore have been shown in the little work that has been done. He has great faith in the location and says there are strong indications of striking the same bodies of ore that are in the adjoining mines. He has offered $\frac{1}{4}$ interest for \$1,000. I am to look at the property tomorrow and will send you samples if there is anything to be had. I will write you more fully about tomorrow night. It may prove an excellent opportunity to secure a fine mine for practically nothing.

These mines are all so easy to work and the ore is so rich that the owners will not listen to anything now less than \$100,000 for a patented claim. It is simply appalling. The very minute a pay streak of silver and smallite is struck up, goes the price to the skies. Nobody seems to be looking for any capital to develop their properties, and you hear everywhere runs ranging from \$100,000. to \$500,000. for mines that can show good ore.

Every acre for miles has been prospected. There is not much outcropping of rock. The country is

fairly level, thickly timbered with small trees,⁽⁸⁾
and with a shallow glacial drift over the
Diacase and Keweenaw and Lower Huronian.

Through Dr. Barlow and Campbell and
others that I shall meet the next few
days I shall get all the information that
I possibly can.

In the sack tomorrow I shall also
send a sample of the Smeltite from the
Earle property previously referred to. The
man whom I got to take me to the mine
swiped this when no one was looking.

Freight rates for car-loads are as follows:
16¢ per 100 lbs. Mines to North Bay,
11¢ " " " North Bay to Suspension Bridge.
14¢ " " " Sus. Bridge to N. Y.
41¢ " " " Mines to New York.

A car carries from 20 to 30 tons.
There is also a \$3.00 Consular invoice per shipment,
regardless of number of cars.

I am,

Respy yours,
Horace M. Wilson.

[INCOMPLETE]

OCT - 2 Recd

Haileybury,
Ontario,
Canada.
Sept. 26, 1905.

Mr. Thomas A. Edison,
West Orange, N. J.

Dear Sir,

I visited yesterday a number of the mines in the vicinity of Cobalt, and am sending you today by Exp. G. way of Boston a package containing a sample of the malachite and calcite gangue from the Drummond mine (Lot 2, Concession 4 N.W. ^{Coleman} Corner) on the East side of Kerr Lake. This is the mine belonging to the late Drummond and his two brothers, referred to in the article in the Boston Transcript of July 29. The mine is now not for sale at any price. Three veins have been opened up which run from \$600. to \$1000. per ton in silver, with hundreds of thousands of dollars in sight. They are simply mining, sorting, bagging, and holding the ore for the present. The Jacobs mine, next to the Drummond (N.E. corner Lot 3, Con. 4 Coleman) is said to be even richer, and the ore there is being held, and, in fact, this is the case with nearly all the properties. I am told that all of the ore that has been

[INCOMPLETE]

shipped the past summer was sold to Earle. ⁽²⁾
Some say that his company is storing it in New
Jersey and others say that some has gone to
Germany. One of the Dominion inspectors told
me this morning that the Earle crowd are
preparing a plant at Copper Cliff in the
Sudbury district to extract the arsenic.

It seems that the mine owners feel that they
are losing too much money by continuing the
sales of ore as they have been doing, and they
now simply refuse to sell at the prices that
are offered. They are offered from 58 to 60 cents
per oz. for their silver, but for only 90 per cent of
it. They did get at the start 65 to 67 cents
per lb. for the cobalt, but this was later cut
to 30 + 32 cents, and now they are not given
anything for it. Arsenic brought 1 cent per lb.,
but they would give nothing for the last shipments,
and the same with nickel.

This is the situation at present, and every one is
wondering how it will turn out. Hundreds upon
hundreds of bags of rich silver and smallite are
accumulating at the various mines, but they won't
sell. There is a chance for some one to come
in, seize the situation, erect the proper works here,
and treat the ores right on the ground. If you

[INCOMPLETE]

were inclined to do this you could have control⁽³⁾ of all the cobalt in this region, and there is a pile of it. You might erect a plant for the treatment of the smallite ores alone, letting them ship their richer silver ores where they liked. Most of this smallite carries a lot of silver, and what they want is full value for the silver in it; and you could probably name your own price for the cobalt. There is no doubt but what they have been badly cheated the past six months.

There is a vast amount of wood here to be had for \$2.00 per cord, and perhaps less in large quantities. Coal, I understand, can be brought in for \$8.00 per ton, but I will find out positively for the R.R. people.

In the same package I am sending samples of bloom, smallite, and wall rock from the Gates property, (S.W. corner of upper half of Lot 3 Con. 5, Colman) on Peterson Lake. A wonderful showing of smallite has been made here. I heard of it through Mr. Campbell (of whom I spoke in my letter of the 24th) and I visited it yesterday with him, otherwise I could not have obtained any samples, as much of the ore has been stolen by prospectors and others. A keeper now is guarding

[INCOMPLETE]

the exposed veins.

(4)
On this property there was a great showing of bloom at one small outcrop. On following up the calcite veins and stepping down to the surface ^{along the ground} of the ledge, for some 30 ft. a smallite vein came into sight, and a few shots showed it to be some 8 to 10 inches wide with smaller parallel veins. The broken and decomposed rock along each side of the smallite was picked away until they had exposed a lump of the solid ore 10 inches wide and sticking up 2 ft or more from the surrounding rock. This was followed by blasting an open trench for some 15 or 20 ft., and this is as much as has been opened up. No further work is now being done as the property is in litigation. Mr. Campbell is closely in touch with the principal owners who will probably win out, and in the new deal there will probably be a $\frac{1}{6}$ interest for sale for about \$25,000 or \$30,000. From other indications on the property this mine will probably turn out to be one of the biggest producers here.

A curious thing about all these mines is that distinct veins of ore running rich

[INCOMPLETE]

in silver and with little smaltite will (3)
run into solid smaltite, and vice versa.

Much of the smaltite is so rich in silver that they are glad to find a vein of either.

It seems that in the diabase the chances for encountering silver are better than in the conglomerate; most of the Lower Huronian or conglomerate & slaty rock running to smaltite. The gangue for both is calcite.

So far I have been unable to find anyone who is willing to dispose of his mine for a small sum. There are hundreds of prospectors here yet going over the ground and on the watch for claims that have been thrown out by reason of no values being brought to light. No one wants to pay a man much for a mere prospect - a few calcite seams - but that is the only period of development when these fellows are willing to listen to a few thousand dollars, for just as soon as a blast-brings ore into sight their fortune is made. There are no low grade or poor mines, not one. Every vein of ore that has been found in all the properties is enormously rich, and none

[INCOMPLETE]

of them have changed as the development (6)
progressed. The Timmins shaft is down 90 ft.
and the ore is as rich as ever. It was
here that the original find was made in this
entire region, right in a cut of the railroad.
The discoverer, a blacksmith named Le Rose,
sold out to Timmins for \$28,000. Millions
wouldn't buy the property now. I took dinner
there last night with Dr. Barlow and
Mr. Campbell, and the stuff they are getting
out is beyond description. There is nothing
like it ever been found before on this
continent.

There are still some other properties that
I want to get posted on, and about which
I will write you later.

The situation at present is a peculiar one, and
now is the time for some one to make a deal for
the ore. If you know how to treat these ores
successfully and extract the cobalt, and can pay
fair prices for the silver, cobalt, nickel, & arsenic, you
could have the output of all the mines if you
wanted it.

I also visited Campbell's claim yesterday. It is
in the lower half of Lot 3 Con. 5 Colman, on the

[INCOMPLETE]

hill to the north of Kerr Lake. It is in the 7
 diabase, but they think it is only a capping or
 overflow over the conglomerate. He has got
 down about six ft. in two places and is following
 a series of calcite veins and seams which vary
 from $\frac{1}{2}$ to 3 inches in width. Specks of silver
 have already been found in the calcite and
 he is much encouraged. Barlow also looked it
 over yesterday, and thought it as promising as
 anything he had seen. It seems that after
 applying for the claim the time limit expired before
 any metal was brought to light, and the claim was
 declared open. The man who has failed to make
 a showing still has 20 days to show something
 before anyone can stake out, but others can
 prospect during those 20 days if they want to
 and the first man to find anything at the expiration
 of that time pounds in his stakes and rushes for
 the mining office at Baileybury. This is what
 has happened in Campbell's case, and he has two
 other competitors on the same 40 acres, and it
 is a case of who gets there first. He has got
 7 or 8 men at work and they are working hard.
 According to his agreement with his partner

SEP 17 1905

Haileybury, Ont.
Canada.
Oct. 13, 1905.

Mr. Thomas A. Edison,
West Orange, N.J.

Dear Sir,

I have had two more talks with Green, and he has finally come down to \$75,000. cash. Even \$50,000. is too much for his undeveloped mine. If his mine and the Keith & Van Hise mine were the only two cobalt mines in Canada it would be different, but when one considers that some 10 or 12 other mines have equally good veins of smallite and that during the next year this number will be increased by further finds of smallite veins on many of these undeveloped claims, it would seem that the prices at which they are holding these properties are unreasonable. I do not think anyone would advise giving over \$25,000. for either of the two above-named mines. I believe by next Spring there will be several smallite properties, low in silver, that can be had for \$10,000 at the most.

As I have also written you, the owners of

most of the producing mines are willing ² to make contracts for their smaltite, and I believe, some excellent bargains could be made with them at the present time. On one mine an extensive vein of smaltite, low in silver, is not being worked at all, as there is no market for it. The same property has numerous rich silver veins which are being worked. There are similar cases in some of the other mines that are now producers, and I think they would be glad to make a long contract for the output of their veins that are now lying idle.

While sure of a year or two's supply from these mines on contract, you could take a stab at some of these finds like the Horron claim and open them up on a working option, and it certainly does seem as if a few thousand dollars spent in this way would within a year result in obtaining a mine that would be as good as either of the two mines that they want \$75,000 for.

Awaiting your directions as to what I shall do next,

I am,

Respectfully yours,

Horace M. Wilson.

Haileybury, Ont.
Canada.
Oct. 18, 1905.

Mr. Thomas A. Edison,
West Orange, N. J.

Dear Sir,

Yours of the 13th inst. received last night.

Regarding Bucknall's claim would say that I have seen him again, but it is impossible to come to any terms with him. He says he can get all the money he needs from one of the Canadian Banks, and means to keep on working with his two sons. He asked me in the most serious way if I thought a million dollars was too much for the claim. Possibly by next Spring he may get sick of it, and would agree to let some one operate it.

A man named Lee, to whom I suggested yesterday the proposition of developing a claim in Lorrain, flew into a violent rage and cursed me up & down, and every one like me who came up here "trying to cheat" the poor prospectors, according to his way of looking at it. It will undoubtedly be very difficult to get any of these fellows, even though they have a most unpromising claim, to turn their property over for development without a cash bonus at the time of signing agreement. They are all afraid, and with good cause, that their claims will prove worthless, and they realize that a few hundred dollars in their

prospect that I visited this morning just ²
west of Haileybury (S.W. cor. $8\frac{1}{2}$ Lot 10 Con. 3 Ducks),
but work has stopped on the small opening they
have made on the vein owing to a scrap among
the four owners, so there is no use in trying
to do anything about that at present.

Dr. Campbell has a small interest in a claim
on the Montreal river, about 12 miles S.W. of
Cobalt, that I think I had better look at. It
is in the Temagami Forest Reserve, and was staked
by C.C. Farr of Haileybury, who owns the greater
part of the town. He has his son-in-law, a Mr.
Blackwell, and Campbell hold it. Practically no
work has been done on it. Campbell would have
gone at it this fall if he had not received his
present claim in the rich silver district. He says
there is a great deal of bloom there, and that
the quartzite and calcite veins are heavily miner-
alized with galena and copper pyrites.

Dr. Barlow has just finished a survey of the
entire Temagami region, and believes that the
same formation around Cobalt extends south
through this Temagami region. I believe that
this claim of Farr's is worth investigating. It is
outside of this Cobalt district that has been
marked off and put under various annoying restric-
tions, and was obtained by a special license,

and the title will be absolutely valid. (3)

Blackwell has offered to take me there and will stand half the expense of the trip. I am planning to leave on Wednesday, returning to Haileybury on Friday. The distance from the railroad is only some 6 miles, but the only way to get in there at present is by a round-about way up Bay Lake in a canoe or launch and then a couple of portages and more canoeing, so that the greater part of a day will be consumed in reaching the property after leaving the train at Latchford.

There are other claims in the same neighborhood that I have heard of, and on all of which there is a great showing of cobalt bloom.

While cobalt bloom may not be an infallible indication of cobalt in commercial quantities, yet where there is so much of it there is a good chance of locating a vein of smallite.

I wish you would please inform me as to the results obtained from the samples in Bags 28 & 29, which were taken from Diamond's claim, west of New Liskard. I liked the look of that claim, and if nothing comes of this Montreal River trip I shall endeavor to make terms with him. I am afraid, however, that he will hold out for some cash payment. They do not seem to appreciate the value of getting their property opened up free of all expense. I regret exceedingly that the time

is slipping along so fast and that I have been ⁽⁴⁾ unable to secure anything of value yet. I realize fully that there is little ~~time~~ ^{time} left to do much development work before the severe winter weather sets in, and I am not losing a minute. There are some men here at the hotel, investors and mining agents, who have been here for the past three months and haven't yet found anything worth putting any money into.

I heard an old chap say yesterday, - and he had no idea that I took any special interest in the Leith & Van Hise mine - that he had just found an elegant vein on the property and that he did not believe that the owners knew of its existence. Have you given up negotiating with Prop. Leith and Van Hise? If you could make some sort of a deal to lease it from them, or to operate it and give them say half the ore mined, I should think it might prove an excellent bargain.

Green and his partners are a hard crowd, and I should not advise having any business dealings with them.

I am,
Respectfully yours,
Horace M. Wilson.

OCT 28 1905

Latchford, Ont.
Canada.

Oct. 24, 1905.

Mr. Thomas A. Edison,
West Orange, N.J.

Dear Sir,

I have just come out from the Darby mine, and hasten to get a line to you by today's mail. I am also sending samples from the mine in Bags 52, 53, 54, and also others in Bags 55 & 56 from the adjoining claim belonging to Darby senior.

Young Darby has certainly got the best showing of cobalt I have seen anywhere, and the father's claim is equally good. I believe both of them will prove better mines than the Van Hise or Green properties.

Young Darby has a partner named John Curdeman of Sudbury, and whom I met at the mine. They have only done a few weeks' work on the claim, but have already traced three good-sized fissures for several hundred feet near the summit of a great hill of diabase and slate. They have sunk on one of the fissures 3 or 4 ft. and exposed a vein

of the ore 3 ft. long and from 2 to 6 inches⁽²⁾ thick. Every blast has shown the rock to be impregnated with bloom in large quantities. It is certainly a most remarkable showing. Darby's "car-load of ore" was rather exaggerated. There is about half-a-ton of mixed rock & ore on the dump, like the large piece wrapped up in paper which I am sending with the Bags.

Mr. Curdorman told me that he had been offered \$20,000. cash for the mine, and I believe it is well worth it. It would be useless to offer anything less, for they are sure to dispose of it. He is holding out for \$25,000 spot cash, but I believe an offer of \$20,100 would break the other deal. Blackwall and myself have become quite chummy with Darby, and I know he will do all he can to put it into our hands. Neither Curdorman nor Darby will agree to any partnership or interest proposition. Curdorman, who is a middle-aged man and who has been in many mining deals, says it is always a very unsatisfactory arrangement to make, and he has had so much trouble in such deals that nothing will persuade him to make such an

arrangement. They both appear to be very ⁽³⁾ reliable men and straight in every way.

Comparing this mine with everything I have seen throughout the Cobalt district I do not hesitate to say that it is far ahead of anything - excepting of course the rich silver mines.

For a few hundred dollars a good level wagon-^{114 miles} road can be made from the mine to Ray Lake, where the bags of ore can be put on a lighter and towed down to the R.R. at Hatchford. During the winter the ore can be sledged the entire way from the mine to the R.R. down Ray Lake over the ice. It will cost from \$2.00 to \$3.00 per ton to sledge it out.

By getting this property you will have a mine from which ore can be shipped, at the very start, providing this vein of ore continues. The other two fissures show quantities of bloom but have not been opened up. There are doubtless numerous others. The entire property has the appearance of being a veritable mine of cobalt. The three veins all run east and west, and are about 100 ft. apart. One of the fissures or cracks is 18 inches wide for a distance of some 20 ft. The wall rock is all diabase.

(4)

The Darby senior mine adjoins this mine, and the fissures & veins pass directly across the line and continue through his claim. He is following them by stripping & trenching. The extension of the big crack into the father's claim shows 3 inches of decomposed calcite, bloom, and ore at one place where they have picked into it - only a foot below ^{sample in bags 55 & 56} the surface. The extension of the vein carrying the ore (Bags 52-54) has been traced for 500 ft. or more on the father's claim, and he has just started to sink on it. The blasts have loosened great chunks of rock with their faces completely covered with bloom.

It would be fine if you could purchase the two mines, for they ought to be operated together. I haven't been able to get definite figures yet from the father. His partner is a North Bay man, and is expected up here today. They will want, however, from what I can make out, about \$30,000, for they claim to have found silver on the property.

If you decide to purchase this Darby junior & Curdorman mine for \$20,000 the deal had better be closed, as quickly as possible. I should advise it rather than waste time & money on these

miserable prospectors. They are a bad lot (5
as a rule, and none of them in the Cobalt
district have found anything all summer
except the Herrons, and they are all
tangled up. Everything in that section has
been staked out and about every claim will
be thrown open, for there is nothing on them.

Young Darby has prospected pretty thoroughly
in this Temagami Forest Reserve, and would
be a fine fellow to engage for further exploration,
although he knows nothing of mining.

If you take this property it will be necessary
to start at once on a winter camp. Blackwell
knows just the men to get for that work and
can save us money. An office, sleeping room
for the men, & kitchen would be about all
that is necessary, and would cost about
\$300.

Telegraph me if you want the mine, for they
are sending samples to Montreal and other places,
and it may be gobbled up any day. I have tried
them on every sort of a proposition, but they will
listen to nothing but a spot cash transaction.
Property has been surveyed & title is clear.

I am, Respectfully, Horace M. Wilson.

Haileybury, Ont.
Canada.
Oct. 29, 1905.

Mr. Thomas H. Edison,
Orange, N. J.

Dear Sir,

Your telegram received yesterday saying: "Don't want to gamble more than ten thousand on Darby and five hundred extra to Blackwall, leaving me free all claim, but title must be clear. Am finding considerable in Virginia, making Canada less desirable."

I went to Cobalt today, and had a talk with young Darby, who is staying there over Sunday, waiting for his partner, John Cryderman, to return from Sudbury. If we only had young Darby to deal with we could get the mine at your figures, but his partner, Cryderman, is an old hand at mining deals and knows he has got a good mine, and I don't believe he will budge a dollar. However, I shall do my level best to get it, and without showing them that I am anxious to have it. The winter coming on is in our favor. If their \$20,000. offer was not a bone fide one, they may decide to dispose of it rather than take the risk of holding it until Spring. I understand that the man who made the offer was Dr. Lanterman of Montreal, and who agreed to put up the money by Nov. 1st. He took samples to Montreal with him recently. If they haven't panned out what he expected he will probably throw it up. I hope the silver showing is small. If I cannot get this mine I will make the offer to

Darby senior & John W. Richardson, who own the ¹²
adjoining claim, and through which the same veins
continue. They naturally declare that their property
is the better of the two. It is no doubt just as
good, for it is all part of the same ridge. There is
less rock outcrop on it, and more trenching will be
necessary, but the soil is not deep.

In the case of these two men it would be easy to
deal with Darby senior, for he wants the money bad,
but Richardson is a business man of North Bay, and
talks big. I shall have a whack at him though,
if Cryderman turns me down.

If you can not get either of these two mines I
should not advise putting a dollar into any prospect
in Bucho or Coleman until next Spring. These two
Lemagani mines are the ones you want, and either
one will be a big bargain at your figures, providing
of course that the samples I sent contained a
good quality & good per cent. of cobalt.

The Frenchman at Sarapinaga Lake hasn't done
enough work to determine anything, and the lot will
probably be declared open. Very little bloom and a
lot of iron pyrites.

Leith & Van Hise are beginning to work their mine in
a small way this winter.

Following your telegram is probably a letter which I
shall get in a couple of days. I'm the mantine I shall
use my best efforts to effect a deal.

I am, Respectfully,

Horace M. Wilson.

Haileybury, Ont.
Canada.
Nov. 1, 1905.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

I am sending you by mail today a piece of ore from John Bucknall's claim, which I first mentioned in a letter dated Oct. 6.

One of the sons brought this piece down last night, and tells me that they are now down 10 ft., and that the ore has changed from the soft powdery stuff into this hard smallite, and that the vein is 3 inches thick.

I asked him what kind of a deal they were willing to make on the thing now, and was much surprised to learn that they would take \$100,000. for the mine, with only \$5,000. cash. This is quite a drop from one million dollars, and gives one a basis to work on. They have evidently had the stuff assayed, and find that they haven't got a native silver mine after all, and are no doubt becoming sick of it. I asked him if they would consider any proposition to take \$5,000. cash and an interest in the output, and he said they would be willing to consider some such arrangement. He then hurried off to catch the boat for the White River, to take him home, and I told him I would think the matter over. He also said they had found several pounds of bismuth so far.

2

Now if this stuff is of good quality, and if you prefer it to the Darby ore (the latter was taken from one to three feet from the surface and may also change in going down) how would it do to offer them \$5,000. cash and half the value of each shipment until say \$25,000 or \$50,000. had been paid to them?

That is, you would get $\frac{1}{2}$ interest in the mine, have absolute control, furnish all operating expenses, and after deducting cost of mining, shipping, and interest on investment, they would get $\frac{1}{2}$ the value of the metals mined, according to the market price at time of shipment. In case you discontinued operations for one year, the property to revert to them.

Or, you might pay them \$5,000. cash and the same amount every six months until the sum of \$25,000. had been paid; payments to cease, however, in case mine proved unproductive or you decided for any reason to discontinue operations. On the payment of the \$5,000. cash you to assume entire charge of the mine and conduct all operations and pay all expenses.

If you want to get hold of this mine - and an 8 inch vein of this stuff is certainly equal to any small size vein I have seen in this district in any of the mines - please make two or three propositions that I can tackle Buckwall on, and in the meantime I will run up there and see exactly what he has got.

John Cryderman, Darby junior's partner, has not yet

returned from Sudbury. He was expected yesterday⁽³⁾ and will very likely come up on tonight's train.

I don't think there is much chance of his accepting the ten thousand dollar offer, from the way he talked the other day, but I know Darby will urge him hard to close the deal, and if Dr. Lauterman drops out Cryderman may begin to feel very different. On receipt of this letter and the Bucknall sample, as soon as you have determined its value, please telegraph me which of the mines you prefer, as by the time you get this I shall probably be dickering with Cryderman or Darby & Richardson, and will hold them off until I get your telegram. The two Darby mines are both a pretty safe gamble, and this Bucknall mine has evidently got a pile of ore in it. The question is which has the best quality of cobalt and the greatest per centage.

If I telegraph for money to close any of these deals, you can deposit it with the Canadian Bank of Commerce, 16 Exchange Place, New York. Their branch here is at Cobalt.

Many thanks for the cheque for \$100. on account. I have sent receipt to Mr. Randolph.

I am,
Respectfully yours,

Horace C. Wilson.

Hailybury, Ont.
Canada.
Nov. 3, 1905.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Bucknall gave yesterday a fifteen days' option to a Chicago man, whereby he is to get \$10,000. cash and ultimately \$100,000. for the mine. The man leaves today for Chicago with samples.

If the stuff does not assay high in silver I suppose there is a good chance of the deal not going through. In that case he will be inclined to listen to more reasonable terms. It is tied up anyway for the next two weeks.

Cryderman failed to arrive yesterday, and young Darby telegraphed to him at Sudbury, stating my offer. If I do not hear from him by noon today I shall make the offer to Darby senior and his partner Richardson at North Bay.

If I fail to get either of these mines, do you want to purchase the Campbell-Blacknall-Barr claim for \$2500? I wrote about this in my letter of Oct. 31, and sent samples in Bags 42 to 49. I have not yet heard from you regarding this proposition.

The only drawback to it is its location. A few hundred dollars, however, would make a good level

road from the mine to the Montreal river, a distance of about 3 miles. A part of the way there is an old logging road in fair condition. For \$3,500. the claim could be bought, camp built, necessary supplies & tools bought, and enough development work put in to prove whether the mine was any good. I have faith in it, and should have advised taking hold of it if we had not heard of these two Farly finds.

Campbell was simply unable to spend a cent on it owing to various other things he was in, and Blackwail and Farr do not know much about mining and would not go to any expense on a claim unless it showed strong in native silver. The two blasts that have been made have showed up cobalt bloom all right, and the two parallel veins of quartz & calcite mixed look strong. I think it is worth purchasing outright rather than pay them \$500. and an interest in the result, which was their other proposition.

I have examined many prospects throughout Bucke and Coleman that don't begin to compare with this - absolutely worthless claims that will never pass the inspector - that the miserable prospectors are asking \$10,000. to \$100,000. for. I was offered two yesterday, one for \$10,000. and the other for \$15,000, and I should be ashamed to advise any friend of mine to spend a dollar on either of them.

Please let me know if the samples in Bags 42-49

3

are sufficiently promising to warrant the expenditure of \$3,500, or \$4,000. on the Campbell-Blackwall Barr claim, in case the two Darby claims cannot be had at your figure. Blackwall is satisfied to take \$500. if either of the two Darby deals goes through, and is making every effort to effect a sale in my favor.

Your letter of Oct. 30th received yesterday, and I regret to learn that Bag 51 is of no value.

If any deal goes through are the documents to be drawn up in your name, or the E. S. D. Co., or my name?

There is a claim here in Truher - about 1 1/2 miles S.W. of Fairlyburg - that I have had my eye on. Only a little work has been done, but an inch vein of dark colored smaltite has showed up. It belongs to three men, and they are at loggerheads, and have stopped work. It is the only one of numerous prospects over there that has showed anything. I shall do my best to get some kind of a definite statement from them as to what they will agree on, and if it is at all reasonable I will send you samples. I don't like the locality, but the stuff seems to be there, and sinking may show up a good vein.

I am,
Respy yours,

Horace M. Wilson.

Haileybury, Ont.
Canada.
Nov. 6, 1905.

Mr. Thomas A. Edison,
Orange, N.J.

Dear Sir,

I am sending you today by mail, in separate packages, Bags 58 & 59, containing samples of ore, quartz, and wall rock from a claim belonging to Allard, Jacobs, & Maloney - all of Sudbury. This is the property that I referred to in my last letter. It seems that they own two adjoining claims and had some kind of a mix-up over their respective rights. The other claim has been thrown open by the inspector, but the one from which I took these samples has a clear title in Moses Allard's name. It is in the N.W. cor. N $\frac{1}{2}$ Lot 9, Con. 2, Bucke, where there is an outcropping of diabase and conglomerate. All this section of Bucke is rather flat, thickly timbered with cedar, and more or less swampy. The rock is nearly everywhere covered with a few feet of soil, there being only occasional outcrops of rock. The area embraced in this claim, however, occupies a slight elevation and has several rock outcrops. It is 2 miles S.W. of Haileybury, and one can be easily taken out to the railroad. They have sunk on two fissures. One is down about 8 feet, but nothing has been found as yet. In the

other they struck a little bloom and black mud² a few inches down, and a foot from the surface exposed a one inch vein of soft cobalt ore, which got harder as they went down, and is $1\frac{1}{2}$ to 2 inches thick about 4 ft. from the surface, and is exposed for about 3 ft. horizontally. At one end the vein dips down under water, they having sunk a pit about 6 ft. deep, which is full of water. Maloney claims that the ore vein continues as deep as they have gone. I will of course verify this before making any deal with them.

I enclose a telegram received from Alford in reply to one asking for his lowest cash price. It is a property that I should hesitate to pay much for in its present condition. There are numerous other prospects in the vicinity, none of which have found anything but strong indications of iron. There is considerable iron stain in both workings on this claim, and little bloom. Cobalt, however, belongs to the iron group, I believe, and the combination here may not be detrimental to the continuity of the cobalt ore vein. It looks as if there might be considerable iron in the ore, and I am afraid it may run into hematite.

If you find these samples satisfactory I would suggest offering these fellows \$1000. cash for a six months' working option, with the privilege of buying the mine at the expiration of that time for \$10,000. cash. Giving the option you to

carry on whatever operations you wish at your expense and to have all ore mined and the right to ship it; but, in case the mine is not purchased at the expiration of the six months you to pay to owners the value of all ore mined, according to market price. (3)

It is perhaps doubtful if they will agree to this with a final cash payment of only \$10,000. Others to whom I have made similar propositions have refused absolutely to make such an arrangement, knowing that if the development work proved a failure they could not dispose of it to anybody. They are going to sell a pig-in-a-poke every time if they can do it, and the buyer must take his chances.

I took Dr. Campbell over to see this mine yesterday. He considers it quite a find, but is also a little afraid of so much iron. He considers it well worth developing if no great amount of money was involved. It is too doubtful a proposition to buy outright in its present condition even for \$10,000.

Another thing that makes these mine owners so hard to deal with is that everyone expects there is going to be a big boom in the Spring, and that prices are going away up.

If I can close with either of the Darbys this week I shall not wait to hear from you regarding this Allard mine.

I am,
Respectfully yours, Horace M. Wilson.

Haileybury, Ont.
Canada.
Nov. 10, 1905.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

I am sending you today by Express, through Boston, samples from the Lorman-McMae claim; also a lump of bloom, in a tin box, from the Darby senior-Richardson claim.

As I wrote you in my last letter the Lorman-McMae claim is in the Temagami Forest Reserve at the head of Bay Lake and close to the river bank (See map sent with letter Nov. 6).

They have exposed two parallel veins about 75 feet apart, the one nearest the river being about 100 ft. from the bank, and running parallel with the shore - about east & west. The claim consists of 17 acres, with considerable rock outcrop, on a slight elevation above the river, and is thickly timbered with a small growth of evergreen & birch. The vein nearest the shore, which I will call vein No. 1, has been exposed by stripping and blasting for about 100 ft. In some places it consists of calcite 3 inches wide, and in other places there is a mixture of calcite and rock, as you will see by the samples. The wall rock seems to be diabase, or a mixture of diabase

and slate, but having no defined contact. The vein matter in some parts is mineralized with what looks like galena. There are also traces of bloom along the entire length of the vein, but no cobalt ore. None of these samples were taken deeper than 2 ft. from the surface.

Vein No. 2, 75 ft. back from No. 1 and a trifle higher on the slope, can be followed by a fissure about 2 inches wide for about 100 ft. They have sunk on one place on this vein to a depth of 4 ft. Samples in Bag 63. Bloom also occurs in this working.

Unless assays showed the samples from this claim to be very promising I should hesitate to lay out any money on it, unless it could be taken up in connection with other work in this vicinity. The calcite in parts looks good, but there is no well defined fissure, and wall, especially along vein No. 1. Development, however, might prove it to be all right. Is there any silver in this galena?

On my return yesterday, from the mine I met one of the fellows from the Darby senior-Richardson mine and he showed me a lump of bloom that he had scraped out of some of the cracks in the rock in their claim. He gave me half of it which I enclose in the tin tobacco box and have marked W.L. 64. This is the mine adjoining the Darby junior-Coydson claim. The same veins run across both properties. This Darby-Richardson mine we cannot get beneath

a letter regarding it from Mr. Richardson.

A few weeks ago the entire property could have been bought for \$25,000 or \$30,000. spot cash. So far they have found no ore, but quantities of blom along the fissures. They have begun sinking, and when I visited the mine last they were only down a couple of feet.

On the other hand the Darby-Cryderman claim has found less blom, but has struck ore within a foot of the surface.

I saw Cryderman again yesterday. He says the first man who offers him \$20,000. spot cash at the Bank can have the mine. The two men who went up to see it a day or two ago seem well pleased with it. One of them is named Murray, and is evidently a mining broker, and I believe from Chicago.

As young Darby will sell his half for \$5,000. and as Cryderman's half of a \$20,000. deal would be \$10,000., it looks as if \$15,000. ought to buy the mine. I am sure that Cryderman will not take a dollar less for his half. He would rather wait till spring if necessary. Young Darby, however, wants to get married, is broke financially, and would be only too glad to get \$5,000. at once for his half.

That is the situation. If you want to give \$15,000. spot cash I believe you can get the property, if it isn't already sold before this reaches you.

Regarding the enquiry in your letter of the 3^d inst. as to how Darby got a little, it would

say that the only prohibited section, in which ⁽⁴⁾
no prospecting or mining is allowed, is the Gillies
Timber Berth, formerly known as the Booth &
Lumsden Timber Berth, ^{in Colman}. Gillies brothers bought
it outright and the Government is bound to
protect them from loss by fire, which would
surely happen if prospectors were allowed on
the ground. The Temagami Forest Reserve
is open to prospecting & mining, but only under
a special license, and which is obtained
from the Provincial government at Toronto.
The old Gillies timber berth formerly included a
section on the south side of Bay Lake which
takes in these Darby mines and runs up into
Columbian on the opposite side of the river, but
it has been all worked over and is now
abandoned. The section on the south side of
Bay Lake is regarded as part of the Forest Reserve
or at least comes under the same regulations.
Temagami Forest Reserve titles are perfectly valid
and are issued only with some discrimination by the
Toronto government.

I also enclose a letter received from Mr.
Hillard.

I am,
Respectfully,
Horace M. Wilson.

Haileybury, Ont.
Canada.
Nov. 11, 1905.

Mr. Thomas A. Edison.
Orange, N. J.

Dear Sir,

Since writing you yesterday I have seen Cryderman again, and he actually began to nibble at the ten thousand. The old fellow is getting tired, and young Darby has been hammering away at him, and Blackwall has been hinting various things to both of them, with the result that yesterday Cryderman asked if my people were still willing to pay \$12,000 for the claim. If I could have taken him to the bank and pointed the money out to him I could have undoubtedly closed the deal on the spot.

So on my return to Haileybury I telegraphed you to the effect that I could probably get the mine at your figure if the money was right on top. If I receive word from you that the money has been deposited in New York I shall get after Cryderman at once.

On Monday I sent by mail two packages of samples from the Allard mine. Yesterday one of them was returned from Montreal with the statement that it was overweight. The post-master here

spent the best part of half an hour studying ⁽²⁾
the rate book and couldn't understand it.
He has forwarded it again with 20% additional
postage.

If you get this Darby Cryderman claim
I believe it will surely be a great bargain,
as far as one can tell from all surface
indications.

I am,
Respy yours,
Horace M. Wilson.

Robert - Darling

Telegram.

Toronto, Ont., Nov. 20, 1905.

Thomas A. Edison:

Constructive tender made. Wilson here. Darby wired will
be here tomorrow. No close deal title as yet incomplete will
wire or write full particulars tomorrow.

John E. Helm.

nickel

DENTON, DUNN & SOULTBEE,
BARRISTERS, SOLICITORS &C.,
NATIONAL TRUST CHANCERS
20 KING ST E. TORONTO, CANADA.
FRANK SUTHER, C.E. HENRIET LOUVE.
W. MILLER BRIDGES

Toronto, November 27, 1905.

Thomas A. Edison, Esq.,

Orange,

N. J.

Dear Sir,-

I am in receipt of your favor of the 13th inst. enclosing Mr. Miller's report on the large mine in the northern nickel range and stating that you have made a general analysis of the general samples selected at different points and also that you have tried the concentration of this ore and find that you can concentrate 90% of the value from 300 tons into 38 tons.

I should have acknowledged your letter earlier but I was away from Toronto when it came and since then I wished to see one or more of the owners of the Nickel-Copper Company before writing you. I am much indebted to you for the report and your letter, both of which I have read with great interest.

Since receiving your letter I have showed it and the report to Mr. John Patterson of the Nickel-Copper Company, who own all the northern nickel range, and he has under date

-2-
DENTON, DUNN & BOULTREE,
REGISTERED, SOLICITORS & C.
NATIONAL TRUST CHAMBERS
80 KING ST. E. TORONTO, CANADA.
FRANK DENTON, ESQ., ROBERT L. DUNN,
© BOULTREE BOULTREE.

of the 24th inst. written me as follows:-

"Dear Sir,- In Mr. Edison's letter that you showed me yesterday, he mentions that he can reduce 300 tons of nickel ore to 38, by concentrating. I would be very much pleased indeed if you could find out from him about what the cost of doing this would be, and how much the machinery would probably amount to, for the purpose of doing this much daily, and, at the same time, let us know what the contents of the 38 tons would be, approximately, in nickel; copper; sulphur; iron &c.

I am asking you this with the idea that we may go on ourselves with this business, as I think quite probable, and, if Mr. Edison's process would be cheaper than the roasting and smelting, it would be a very good thing for us to adopt it, paying him either for his patents or for the use of them, or for the use of his process if not patented.

Thanking you in advance for your trouble, I remain, Yours very truly,"

Yours sincerely,

Frank Denton

B. F. Fachenthal, Jr., President

James W. Weber, Secy & Treas.

THE THOMAS IRON COMPANY.

MANUFACTURERS OF

FOUNDRY, FORGE, BESSEMER AND OPEN-HEARTH BASIC PIG IRON.

ROKENDAUQUA FURNACES.....ROKENDAUQUA, PA.
KEVSTON FURNACES.....ISLAND PARK, PA.
LOCK RIDGE FURNACES.....ALSBURIE, PA.
SAUCON FURNACES.....MELLENTOWN, PA.

Easton Pa December 4, 1905.
Had this

Thomas A. Edison, Esq.,

Orange, N. J.

Dear Sir:

On my return home from Cuba I find your letter of the 24th ulto. awaiting me.

I do not know of any capable mining captain whom I can recommend to operate a cobalt mine in Canada. I speak advisedly, because I was lately asked by the estate of Abram S. Hewitt to recommend a foreman to take charge of their mines at Ringwood, N.J., and although I finally recommended a man, who has turned out to be entirely satisfactory, I found that men of that character are very scarce.

A man by the name of John F. Smith, whose address is Riverdale, N.J., called at my office during my absence, saying that he would like to have a position as mining foreman. I know nothing about this man, although he claims to have worked for Cooper & Hewitt. If he calls at my office again, I may learn something more definite about him.

There is a man living here in Easton by the name of Thomas Branch, a Cornishman, whom I would be willing to recommend for the position you speak of, but I am not sure that he would like to go to Canada. This man Branch is in every way competent, strictly honest, and intelligent enough to take care of the accounts at his end of the operation. I will look him up, and if he thinks he would like to become an applicant for the position, I will write you again.

Yours truly,

B. F. Fachenthal Jr.

Nickel. gun

Send on the names of the
men & I will look up

Gouverneur, N. Y. 12/8th 1905

Mr. Thomas, A. Edison,

Orange, N. J.,

their records

DEC 12 AM '05

DEC 12 AM '05

Dear, Sir,

Yours W. L.

After due consideration, I have concluded that I cannot see my way clear to accept your kind offer of a position in Canada, But if you should wish it I know of a couple of men that I could thoroughly recommend for the position. In the mean time I remain Yours very truly.

J. W. Williams

Cobalt.
Considering mine

PERKINS, INCE & CO.

WHOLESALE GROCERS,

41 & 43 FRONT STREET EAST.

DEC 14 AMT TORONTO. December 12, 1905.

Send bill of goods to me at
Orange and I will
forward check for

Messrs. The Edison Storage/Battery Co.,

Edison Laboratory,

Orange, N. J. U S A

Same —

Dear Sirs:-

Mr. Horace M. Wilson called on us a few days ago and mentioned that he was developing a Cobalt mine in your interests at Latchford, Ont., and was kind enough to leave with us an order for supplies for the camp in connection with the mine. He instructed us to have the goods prepared and send invoice to you and to hold them until he advised us by wire to ship.

Everything is ready with the exception of some Meats which it would be unwise to put up until just before shipment is made, and we cannot therefore send you an accurate invoice until the goods have actually been shipped. Approximately it will amount to about \$265.00, and we would be glad to have your confirmation.

We remain,

Yours truly,

John Henry Inc. Gray

Col (Harris)
(Colonel)

DEC 14 1858

Wilson

Litchford

Ontario

Please make a weekly report
of all that you do, also send
for Rand & Co, account of all
expenses and expenditures, orders etc
given at the same time.

If you could expedite the shipment
of that 100 lbs of ore from Daily
mine it would like it

Edison

Litchford, Ont.

Dec. 17, 1905.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Your letter of the 12th inst, enclosing Mr. Woodworth's, at hand. Before receiving it I had already called upon him at the water line, and arranged to have him ship to you 10 or 15 tons. He will ship it as soon as possible, but, as they been delayed in their mining owing to timbering the shaft and setting up a boiler and hoisting engine, it will probably ^{be} a couple of weeks yet before he can get it off. He understands fully regarding the price (35¢ per lb.) and he is to pay the freight. I made enquiries at North Bay regarding freight rates, and find that the price is the same to New York, Newark, and Orange.

As the per cent. of cobalt in Woodworth's shipment is to be determined by Liden's test, should the car be sent first to his sampling works (at Bergen Junction I believe) or will he need a man to Orange to take samples? Kindly inform me as to this point so

that the Hills of Ladang &c, can be properly made²
out.

Enclosed please find an interesting article regarding
an alleged German process for treating these silver-
cobalt ores.

As soon as I get the first camp building up
and the blacksmith-shop in shape I shall begin
at once on the vein outcrop, and will send you
some more ore at the earliest possible moment.

Shall I write to Kedoug regarding the sampling
of the Woodworth ore or will you attend to it?

I am,
Respectfully yours,

Horace M. Wilson.

DEC 18 1892

Wilson Latchford Ontario

Just got word from the
Canadian Copper Co that they
will not be in a position to
supply me until summer I
cannot wait that long —
So you better see what you
can do about buying
ore offering 40 cents per lb
for 6 Car Cobalt for the
Cobalt metal only — you can
buy as low as Ten Cents
to be paid for an Adelux & Co
convey N.Y.K. — no allowance
for any other metal As Nickel
etc is a positive detriment
~~at~~ Nothing less than 10%
Cobalt ore for bought —

You can send out the word
that I will buy at these
figures as there is no longer
any need of concealing my
name — They ought to
give the poorer men a chance
to sell and get a little
ready money for the ore
they find in prospecting &
opening their mine
~~oh~~ I keep me posted —
I am going ahead erecting
the works for getting metal
out of ore —

~~John~~
Edison

DEC 20 AMT

Wilsaw -

Latchford Ontario

I will arrange with
Ledoux & Co + will let you
know when arrangement
has been made and
shipping directions,

Yours
Edwin

Telegraph

Wilson

Letchford

Canada

~~The~~ Bag of ore ~~has~~ not yet
arrived, was ~~sent~~ expressed

Bill

Edson

Chas

ESB Co - Sent Dec. 23-05

11 A.M.

W. V. J. Co

Est - Hand
(October)

Dec 27-1901

M. Wilson

Haileybury
Ontario

Have telegraphed you to Litchford
received my reply - was not yet
received, send a report twice a week
answer,

Edison

John ~~ask~~ ask Will Tel of if
there is a telegraph office at
Litchford Canada

Wm. Keith Bay

Ed - Huntington
(10/25/25)

DEC 29 AMST

Wilson
Hatchford
Ontario -

You can ship the Car load of ore
which you may buy direct to
Ledoux & Co New York They
will sample & ship here - I will
on receipt of Ledoux's Certificate
send the Cash for the shipment,

I would prefer to have the ore sent
direct to laboratory, then Ledoux's man
could come over & sample using
our laboratory Crusher this would
save expense but I suppose the
Seller might think this was not right
& object

Bag arrived Today 28th - Ho Edison

NEW YORK, EMPEROR BUILDING PITTSBURGH, FRANKERS BANK BUILDING
BOSTON, BOARD OF TRADE BUILDING

PILLING & CRANE
IRON, STEEL, ORES, COAL, COKE
GIRARD TRUST BUILDING
BROAD & CHESTNUT STREETS
PHILADELPHIA

DEC 30 1894

December 29, 1905.

W. Miller

Mr. Thomas A. Edison,

Orange, New Jersey.

did you write
Wilson about
the magnetic
assay
patent
E

Dear Sir :

In a recent conversation, you advised me that you
understood some ore had been discovered at the Hurd mine. I have
since ascertained that a shaft has been sunk on the property to a
depth of about twenty-five feet, but no ore was found, and there
is nothing going on there at present. There is another Hurd mine
in New Jersey, however, where recent discoveries have been made.

I saw Mr. Conley yesterday, and he has not yet
received the magnetic assaying machine which you expected to send
from Sudbury. We would be glad to have this at Arnold if it is
available.

Yours very truly,

J. P. Crane

T.I.C.

Crane - My man at Canadian mine
has been ordered to send the
magnetic assaying outfit
E

P.S. The Darby Mine bags I will
mark with a D.

When a bag is emptied all the powdered
stuff & dirt should be saved, as much of it
is bloom & chips of good ore, and is rich stuff.

Latchford, Ont.

Dec. 31, 1905.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

I am sending you by the Dominion
Express Co. tomorrow another bag of ore from the
dump. This lot is much better ore than that sent
on the 15th inst., and there is double the quantity
of the first lot. I find that the cost of
expressing will not be great, so I thought
I had better hurry this bag along by express.

The holiday season is somewhat interfering with
the completion of the camp, and the beginning of
the work, but the coming week will see things
in fairly good shape.

I shall celebrate the New Year by putting
in the first shots.

I have not heard from you yet regarding the
destination of the Bates Mine shipments.

I am,
Respectfully,

H. M. Wilson

See notes

Darby

Bags 50 52 53 + 54 + Big Chunk -

1 1/2 miles from head of Bay Lake in Teanagum Forest

Reserve - It is much more accessible than Blackwells

With small gasoline launch one can be lightered down
to RR at Litchford

Three good sized fissures several hundred feet long
near summit of big hill of Diabase + Slate

Sunk 3 or 4 feet - run 2 to 6 inches

Every blast shows rock impregnated with bloom

Half ton like the big chunk sample now on dump

For few hundred dollars, good level wagon road

1 1/4 miles long can be made to Bay Lake where bags
of ore put on lighter + towed down to RR at
Litchford

During the winter one can be skidded entire
way over lake on ice for 2 or \$3.00 per ton

Blackwell knows just the men for putting up

Winter quarters, Office sleeping room for the men
+ Kitchen Cost \$300.00 Property survey + Title clear

Thos J Reynolds

No 9 E Dickerson st. Dover ^{Conn} Scotland, N.H.

Hibernia Mine Capt under S B Paterson
9 yrs ago with them 2 yrs -
gave up to take posn as St Comm in
Dover.

Genl Supt Washn Forge Mine.
There 5 yrs John Brown of Easton
was presd after the Co is dead.

Contracted for Conn. Iron Co on
Randall Hill, 4 or 5 yrs -

Dickerson Mine, worked outside
places on rental,

Operated on account himself
several outside mines -
Stellingsma -

Now working for D & W putting in
Concrete Platforms

**Mining Exploration Company of New Jersey and Related Records
Thomas A. Edison Files - Correspondence (1906)**

This folder contains correspondence and other documents relating to the Darby Mine and other cobalt-bearing properties in the Sudbury district of Ontario. The correspondents include Edison and Horace M. Wilson, mining scout and manager of the Darby Mine. There are also a few reports from D. H. Haight of Ontario.

Approximately 30 percent of the documents have been selected. The unselected material consists of routine reports from Wilson.

Litchford, Ont. Jan. 7, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Yours of the 2^d inst. at hand. I am glad that I anticipated your desire for another bag by express, and I trust that you have already received it.

I am sending you by freight tomorrow four bags of ore, — all of it from the vein. I am tearing off the capping and following down the shivering foot-wall, which dips at an angle of 45° .

In one of the bags are two chunks of rock & ore, each weighing some 15 or 20 lbs. I thought I would send these just as they came out, as interesting specimens.

You will notice that two of the bags contain mostly bloom, some quite pink and some almost white. The men call it calcite, that is the paler stuff, but I do not think it is calcite at all. By same mail I am sending you Part II. of the Report of the Bureau of Mines, and I wish to call your attention to the paragraphs marked on pages 8 and 13.

Between the capping and the wall and mixed with

(2)
the ore we are encountering considerable of this tough substance in sheets, and, as you will see, varying in color. Enclosed in the larger masses is considerable pure ore. Rather than break the stuff all up and cob out the ore I concluded to send this lot just as it occurs, and you will please inform me whether to accumulate it here for future treatment or to bag it and ship with the first car-load. It probably only occurs a few feet down from the surface, but as other veins are opened we may get a good deal of it.

In the same bags with this white bloom you will also find a few pieces of brown stuff, some rather earthy and some quite tough, looking somewhat like bloom saturated with iron oxide. There is not much of this, but if it has any value please let me know. It may be the material referred to on page 14 of the Report.

I shall run up to Cobalt in a day or two and hasten along the Bates mine shipment.

The fellows who have some cobalt on Portage Bay have not returned yet.

I have written to Bucknall asking if he had any ore to sell, but have not heard from him.

I shall call upon Bretterway when in Cobalt tomorrow and see if he has a few tons.

I shall lose no time now to get a car-load out of the Darby mine.

Respy yours, H. M. Wilcox.

Darby Mine,
Litchford, Ont.
Jan. 14, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

I have been trying hard to buy some ore this past week, but so far have not succeeded. Bucknall has not replied to my letter, and I find that he is still tied up with the man to whom he gave an option on his mine. I found the man - a Mr. McFinnon in Hailyburg, and had a talk with him. He claims that he is going to buy the property, and as soon as the deal goes through he will communicate with me regarding the purchase of ore.

At the Frothway mine there is a ton or two, but Frothway is still away. He is expected back this coming week. He will probably want a high price for it however.

The Fenishaving & Hudson Bay Mining Co. had nothing. The Buffalo Mine has nothing but ore running high in silver.

Woodworth, of the Gatto Mine, has been unable yet to get out the promised shipment. They struck some good ore in the shaft about 30 ft. down, but have gone through it, and are now into caliche again. He declares that he will now drift on the ore that they have passed through, and still promises to make the shipment. His delay in filling the order is extremely annoying to say the least.

(2)
I have also had a talk with the Limmins mine people. The two brothers - one of them being the one who called upon you at the Laboratory, - are desirous of selling some 5 or 6 tons that they have on hand that carries low silver values, but they will not let it go less than 60%. They would not give me a definite figure until they talked with their partner, Mr. Martin.

Some time ago, when I was travelling around here incog, I suggested to Limmins that he lease me a cobalt vein that they are not working. It can be traced for over 400 ft and can be easily worked. They worked it for awhile, but, upon finding the rich silver veins, abandoned it. The idea didn't appeal to him at the time, but yesterday he brought up the subject himself. When Mr. Martin returns they are going to talk the thing over, and I told them if they would submit some proposition that would be equitable all around I would present the matter to you.

They have undoubtedly got a good cobalt vein there, and if we could work it on some royalty plan it might be a good way of getting considerable ore. It is within a few hundred feet of the railroad and would be a fine thing to get hold of. The plan would be for us to have our own gang of men, pay all mining expenses and give them as much free ton of ore shipped. I am to meet them again on Saturday next. On Friday there is to be a meeting of all the mine owners to discuss the smelter schemes and the general state of affairs and prices, and something may come up which will perhaps

cause them to postpone any action on the proposed leasing of the cobalt veins. I will at once inform you of the result of my next interview with them. (3)

The Leitch & Van Hise Mine has some 20 tons of cobalt for sale, and the manager tells me that they have already two offers for it at 60¢. It runs 25% or more cobalt. All I could gather was that the offers were from Canadians and that they were buying for some one abroad. This is the most distinctly cobalt mine up here, and would be a good source of supply if you can come to some satisfactory terms with them. Prof. C. K. Leitch, Madison, Wisconsin, is the one to make terms with. You have already had some correspondence with him regarding the purchase of the mine, but I do not know whether you have written him regarding the buying of ore. Do you wish me to take up the matter with him, and are you ready to pay 60¢ or 65¢ if necessary?

Simmons says you told him that "the Trust" offered to sell you ore for \$1.37 1/2 ¢ per lb. I told him that I thought that price must have been for some long contract for metal, but he declared it was for the crude ore. Is he right? If such is the case they no doubt consider 65¢ or 75¢ cheap enough to sell it for on their part.

Work is going on well here at the mine. We are still stripping off the capping, and tomorrow I am to begin work on the other fissure.

Respectfully, Horace M. Wilcox.

Nickel. Sen

C A B L E.

Noumea, Jan. 18, 1906.

Edison, Orange.

Repondant votre cable notre etablissement traite pas
operation proposee si vous desirez pouvons transmettre vote offre
societe le nickel.

Indochine.

Answering your cable, our establishment
does not undertake proposed operation. If you
wish we can submit your offer to the
"Nickel Company"

Darby Mine
Litchford, Ont.
Jan. 28, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Your letters of the 22^d & 23^d inst. at hand, and contents noted.

By same mail I am sending you samples in Bags 80 & 81. Bag 80 contains samples of two different rocks that form the capping on the slanting wall of Vein No. 1. The coarser grained one is superimposed upon the other, and at 5 ft. from the surface they are each some 3 ft. in thickness measured at right angles to the slanting wall. They both contain spatters of a bluish or purple colored material which has a metallic look, but on scratching it the streak is more like rock.

We are down 10 ft. on Vein No. 1 (the one in which ore was originally found) and the slanting wall is slowly dipping to a more vertical position, but the ore and bloom have not yet appeared again. There are some 8 to 10 inches of shattered, loose rock and earthy gangue between the wall and the solid capping however, and the last shots yesterday showed up considerable

calcite mixed with the gangue, which is an ⁽²⁾ encouraging sign in these veins.

Bag 81 contains ore and blooms from vein No. 2 (the large fissure) found 6 ft. from surface. Only a few pieces were found in the gangue against the north wall. The walls at this point were 16 inches apart, and were filled in between with soft shattered rock and earth.

Bag 81 also contains a piece of very black earthy substance encountered in the gangue between the walls from 8 to 10 ft from surface. Several shovelfuls were taken out. It may be only decomposed vegetable matter, but its extremely black color makes it look like some black oxide - perhaps silver or asphaltite. We are down 10 ft. in this vein sinking a shaft 5' x 6' which can be readily enlarged when we strike good ore. The last shots yesterday showed more bloom in the gangue and on the wall. Both walls are going down plumb, and appear to be widening. They are now 18 inches apart.

I am pushing both gangs as hard as possible, and they are making good headway considering the season of the year. As the days are now getting longer we will be able to get in more time every day. Two weeks

ago it was pitch dark at 7.30 A. M., and we ⁽³⁾
did not get fairly at work until 8 o'clock. At
4.30 P. M. on stormy days it was too dark to see to
work and we would have to knock off. It is now
light at 7.30 A. M. and we can work up to 5.30
P. M., and before long can get in a full ten hours.

I am confident that there is plenty of good ore on
this property and the one adjoining (Richardson-Ferguson).
As soon as the snow is gone in the Spring and the
frost is out of the ground I want to do some
trenching to locate certain contacts that are now
buried under a few feet of earth. Somewhere
on the property there is a big contact between quartzite
and diabase, and also a slate contact which has
not been located. Some of these contacts are pretty
sure to have ore veins in them. I have a good
foreman in Mr. Robb. He is familiar with all the
mines here; and from the showing on this property so far
he feels certain there is a large body of ore here.

I hope you will be able to get the adjoining claim later
on, for the 80 acres are practically all one mine.

Did you receive my letter of the 7th inst?

I am,
Respectfully,
Horace C. Wilcox

S. Woodworth in Ottawa.
Expected back today. Will call on
him tomorrow and report in next
letter.

Darby Mine,
Lafayette, Ont.
Jan. 31, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Your letter of the 23rd inst. and two of the
26th inst. at hand. What you say about New Caledonia
ore greatly interests me, and while I am glad that there
is a large supply available there yet I shall do my best
to make shipments from there as few and far between as
possible.

Shaft No. 2 is getting into some mighty good gangue
matter, and I shall be greatly surprised if we do not
get into good ore there in a few days. By same
mail, and in separate packages, I am sending you Bags
82 & 83. Bag 82 is from the Richardson Ferguson
claim, the continuation of Vein No. 2 and 300 ft. from
where we are sinking Shaft No. 2. Bag 83 is from
our Shaft No. 2 on Vein No. 2, eleven ft. down, and
is from 4 to 6 inches wide and improving. Compare the
samples in the two bags and you will see that they
are the same, only we are not yet into ore.
Please inform me what those green fan-shaped crystals
re. (Millebite? Hornblende?)

We are now rigging up a winze over Shaft No. 2,

and will continue sinking as rapidly as possible. (2)
The north wall rock through which we are sinking (following
down the south wall - that is, leaving it intact) is very
hard to drill. It is a very compact hard diabase.

The samples in Bag 82 (Richardson-Ferguson) occur in the
vein only 4 ft. from the surface and the ore gangue is
from 8 to 10 inches wide. They put in only a few shots
and then quit. On our property the rock dips,
and the space between the walls had nothing but earth
and loose shattered material for the first 6 or 8 ft.
We all feel confident that we will get into ore now
pretty soon. I will telegraph you if we do, and I
hope you will be able to come up here and see
it.

On Vein No. 1 (where all the ore originally came
from) we are putting some shots into the slanting wall,
as there is a slight indication of a seam on it and
it may prove to be the top edge of a false cap, with
the ore running behind it. I will inform you further
regarding this in my next letter.

I am greatly surprised to learn that the 4 bags
shipped by freight on Jan. 8 (see letter Jan. 7) have not
yet been received. I will write to North Bay at once
regarding them.

Did you receive the 100 lb. bag shipped by Express Jan. 7?
(See letter Dec. 31)

I am, Respy yours

Horace M. Wilson

Darby Mine,
Litchford, Ont.
Feb. 6, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

We have not sunk further in Shaft No. 2 the past two days, as it has become necessary to cover in the top and erect a winch. This will be completed today, and we will start in drilling again tomorrow morning. The rock is extremely hard and the men are complaining that the $\frac{7}{8}$ " steel is too small. It springs and bends unless struck lightly, and to make any impression on this rock an 8 lb. hammer and 1" or $1\frac{1}{8}$ " steel will be necessary. Most of the $\frac{7}{8}$ " drills that I brought from Sudbury had evidently got badly heated in the fire at the Slaughter House, and many of them were bent, and in spite of all the blacksmith can do it is difficult to keep them in shape.

Five shots in Shaft No. 1 yesterday afternoon showed up considerable calcite in the capping against the slanting wall. One of Cryderman's

sond was up here yesterday. He is an old (2) miner and is familiar with the conditions met with throughout this region and says it is not unusual for the ore to give out as it has done in this case. He likes the look of the slanting walls and advised sinking on it further.

He also showed me a very promising looking place on which he did only a day's work last fall just before the property was sold. It is some 500 ft. east of Shaft No. 1, and evidently a continuation of the same vein. He put in 3 or 4 shots there and exposed two good walls, with a lot of blower, calcite, and copper pyrites. He sunk only a couple of feet, and the walls at that point are 6 inches apart and filled with vein matter, samples of which I am sending by today's mail in Bag 85.

I have started two men this morning clearing the snow & ice away at this spot, and I shall start in opening it up at once. I think I had better hire another man, a good striker, so that we can push the work as fast as possible in all three places.

It was 48° below zero yesterday morning, and 46° below this morning.

I am, Respy yours,

Horace C. Wilson.

Darby Mine,
Litchfield, Ont.
Feb. 8, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Woodworth informed me yesterday that he had shipped the bloom. I will get the exact weight and number of bags from him in a few days and notify you before they reach Orange.

He says they are getting into a fine vein of ore in their second shaft, and he hopes to be able to ship you a car-load before long. I shall visit his mine sometime next week, and will report to you exactly how things look. I believe you will be able to obtain considerable ore from his property after more development work has been done.

The \$100,000. option on Bucknall's mine is all off, and the old man has come down to \$80,000. Cash \$15,000; \$15,000. in six months, and balance in one year.

I will go up and see him before long. How would it do to lease or rent the property from him, providing he will listen to such an arrangement? Just a straight lease, we to

have full and exclusive mining rights, subject (2) to an annual payment in advance of say \$5,000., and with the documents so drawn up that all mining plant may be removed from the property at any time by us if work should be abandoned.

If you wish me to dickie with him on some such terms I will approach him on the subject, and if I succeed in coming to some satisfactory arrangement Helm could come up and clinch the thing. By interviewing Bucknall with some such proposition it might be the means of his finally accepting some reasonable spot cash sum for an out & out sale.

When convenient, please let me hear from you on this subject.

I am sending you by mail today Bag 86 in one package, and Bags 87 & 88 in another package.

Bag 86 contains samples from the capping in Shaft No. 1, and containing a spattering of blue mineral through the rock like sample sent in Bag 80 last week. The rock is now carrying a greater quantity of this metallic looking mineral. The streak and powder

are not very dark, but it seems as if the stuff⁽³⁾ must be some kind of ore. The rock seems to be all shot through with these blue or violet patches. Please let me know if it is cobalt, and whether this rock should be put on the dump by itself for future treatment, or whether this blue-violet mineral is worthless.

Bag 87 contains a sample from a vein of calcite, with a little quartz, which is just coming in along the bottom of Shaft No. 1, in the copping 16 inches from wall and 11 ft. from surface.

Between this calcite vein and the wall the rock is beginning to carry considerable calcite, and the wall is beginning to dip a trifle more vertically. It certainly begins to look promising.

Bag 88 contains three small pieces containing cobalt, galena, and copper pyrites, knocked off of the gangue in the opening 500 ft. east of Shaft No. 1, and 2 ft. from surface. Am putting in the first shots there today.

Winch over Shaft No. 2 all completed, and sinking is now being continued.

P.S.

(next sheet) I am, Respectfully,
Horace M. Wilson.

Feb. 9.

P. S. Yesterday afternoon a drill in the bottom of Shaft No. 2 when down about 20 inches suddenly went into some comparatively soft material, and upon examining the mud brought up by the spoon I was sure we had drilled directly into cobalt ore. They drilled into it some 4 or 5 inches and did not go through it.

I enclose some of the mud herewith. I have decanted and washed some of it, and under the glass the bright clean metal is visible.

We are now completing other holes around the floor of the shaft so as to lift off a good section. If we strike something good I will take the liberty of adding the cost of a telegram to my expense account for I know you are anxiously awaiting some good news.

H. M. W.

Darby Mine
Lafayette, Ont.
Feb. 10, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

I am sending you by mail today Bag 89 containing samples of ore into which the drill went on Thursday. The blasts barely exposed the vein, but I was able to break out a few pieces. It looks like fine ore. The vein seems to be running across the bottom of the shaft, diagonally, a kind of offshoot from the main gangue between the walls. The width of it can be seen by the samples, and it appears to be widening as it goes down. Its sides are vertical. We will not be able to get at it until the rest of the shaft is lowered another foot or two, and the men are now hard at work chipping in various places around the bottom. I will notify you immediately upon getting further results. The rock continues extremely hard.

Hoping to have some good news for you in a few days, I am,

Respectfully yours,

Horace E. Wilson

collected notes

from E-1721
6519 Feb. 1906
To Cobalt & Nickel Search.
1906-02-13
FEB 13 AMT

Wilson.

Latchford
out

Please return your criticism of the following plan of dealing with Bushnell.

Bushnell to give to Edison an option for a period of one & half years to buy his mine for say \$75000.

Edison agreeing that within sixty days after he is given the option he is to start erecting a camp, purchase necessary machinery and start

developing the mine, taking out ore. All ore removed is to be sold to the Edison Storage Battery Co on the basis of 40 cents per pound of Cobalt 70B Orange N.Y. Redoux assay

2

that if the ore should in time show silver exceeding 60 oz per ton of ore shipped then the Battery Co shall alter its process so as to save the same and shall pay for ninety per cent of the silver at the market price, but if less than 60 oz the Battery Co need not alter its process to save the same without it chooses to do so, & in that event only 60% of the silver shall be paid for at the market rate. All money received from the sale of ore to the Battery Co after the actual cost of mining & dead work over each 3 months having been deducted by Edison the balance or profit shall

be divided in the proportion of
50% percent to Bushnell &
50% percent to Edison for
furnishing the money for working
the Mine,

At the end of the 18 months
Edison is to decide if he is to
exercise the Option and pay the
purchase price, If he does so
half of the money received by
Bushnell as profits on the sale of
ore ~~into~~ during the Option period
is to apply on the purchase price
for instance if Bushnell receives
5000 profits during that period
7500 is to go on the purchase
price, so that he would receive

Say 67500 Cash + 15000 profits.
or 82500 total, ^{more} or less according
to the Mine affording ore,

If Bushnell desires that Edison
shall not exercise his Option
at the end of the 18 months
but prefers that he shall not
exercise it for another period
of 18 months to enable him to
derive more profit he shall
have that right, but in any
Event if the Operations of
Edison over a period of 3 months
shall have resulted in a loss
to him he shall have the
right to terminate his arrangement
& withdraw his machinery

5

The Camp Buildings +
mining work reverting to
Bushnell as well as any
money Bushnell may
have received from the
sale of ore - all disputes
as to meaning of Contract to be
settled by Arbitration
Chicago

If anything can be fairer
than this I would like to
know it — Σ

P.S. The soft powder sent on 8th
July is full of smut &
no silver — Σ

Darby Mine,
Litchford, Ont.
Feb. 18, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Your letter of the 13th inst. received yesterday, regarding the Buscknall property. Your plan is certainly liberal enough, and by such an arrangement it would be a steady source of income to him, free from all expenses. I shall go up to his farm on the White river tomorrow and have a talk with him and his two sons, presenting this proposed arrangement to them, and will report to you on my return.

I have decided not to follow down the slanting wall on Vein No. 1 any further for the present, and have begun on an open cut along the vein eastward starting from Shaft No. 1. There has evidently been a great upheaval and fault where we followed down the wall, and I believe we can now strike the ore quicker by an open cut along the surface, as there are indications that a little farther along the wall assumes

a natural position. The first shot that (2)
we put in to start the trench shattered about
half a ton of rock permeated with bloom and
the superficial surfaces of the fragments covered
with it. Much of the rock also carries small
spots and patches of ore, and I am putting
it all one side. We have struck into an
ore-carrying gangue or vein all right, and it
is over 15 inches wide in the widest part.
It appears, however, to have been sheared
off, and we have not yet determined as to
its continuity. Further work tomorrow will
show up whether it is a pocket or not.
There are other spots of bloom quite distinct
from this in another part of this new cut,
and I believe we are on the right track.

I sent you by mail on the 17th inst. Bags 93,
94, & 95 containing samples from Shafts 1 & 2.
Shaft No. 2 is getting better every day. We are now
down 16 ft.

I expect you will be able to buy the Richardson claims,
most of us, all right. These two mines are sure to
show up a lot of ore. Truly yours, H. M. Wilson.

Haileybury, Ont.
Feb. 20, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

I have reached here tonight on my return from Bucknall's, and I am sending you by Express tomorrow 78 lbs. of ore from his mine, for which I paid \$4.80, figuring it as 15% ore at 40¢ per lb., which was the lowest price he would let it go for. Enclosed please find receipt.

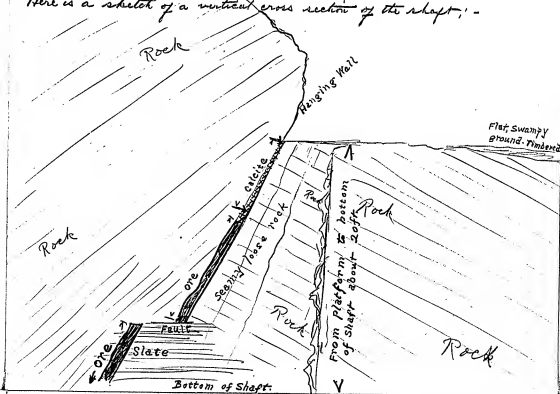
I had a long talk with him and his son, submitting your plan to them, but it did not wholly please them. They do not like the idea of depending upon half the profits for 18 months with the possibility that at the end of that time you might give it up. If they had no prospective buyers in view I believe they would consider the offer seriously, and they may yet do so, but they already have two parties considering the purchase outright of the property, and if they can possibly make such a sale they say it will be much simpler and more satisfactory. I enquired as to what terms they are giving these people (one of whom is here at the hotel at Haileybury and I haven't any fear of his doing anything), and what they are asking is \$80,000 to be paid in cash within one year, with a cash payment on signing the papers of \$3,000.

and the balance in monthly payments.

If \$75,000. was offered them with monthly payments of \$5,000 (extending over 15 months) they would probably accept. They agreed that if at the end of any month work was discontinued there should be no further payment due them and machinery could be removed. They are willing to risk the chance of the mine giving out before they get the entire \$80,000, but they want the installments to be fixed and regular and in advance as long as operations are conducted. ^{up to \$5,000 each.} The idea of a partnership basis with the fluctuating ore percentages and the uncertain factor of operating expenses, etc., was confusing to them. I will keep hammering at them, however, and we may land them yet, unless you decide to accept their terms of fixed monthly payments. I think they ask altogether too much per month. It is doubtful if more than 25 tons per month of 15% ore could be mined, which amounts to 7,500 lbs. of metal. To pay them even \$3,000. per month for the privilege of mining this maximum amount seems pretty high.

Regarding the mine itself, the showing at present is certainly a strong one. There is a shaft down about 20 ft., following a hanging wall dipping at an angle of about 20° from the vertical, having a calcite vein against it averaging 3 inches in width. About 8 ft. down this calcite vein becomes mineralized and for 10 ft. down is mostly solid ore, as per samples. In one place there was a kidney or pocket some 8 inches wide of mixed ore and

calcite (See large piece in shipment). About 18 ft. (3)
 down there is a fault and the ore vein comes to an abrupt end on some horizontally stratified slate. On losing it at this point they drifted a small opening in the slate and about 2 ft. back found the solid vein of ore again dipping at the same angle, and looking a little thicker if anything. This is as far as they have got up to the present time. They only work at it a day or so now & then. They have got 2 or 3 tons stored in a shack near by, and don't care to sell it until the mine is sold. They have an idea that they will be able to get more than 40¢ for it.
 Here is a sketch of a vertical cross section of the shaft: -



They tell me that several hundred feet away and (4)
running nearly but not quite parallel with this vein is
another seam or fissure that can be traced for over 200 ft.,
and that contains a lot of bloom. As there is over
2 ft. of snow & ice on the ground I was unable to look
at it. The chances are that there is another good vein of
ore there too.

Their shaft is about 6 ft wide, and they have so far
taken out an almost solid mass of ore 6 ft. wide, from
2 to 4 inches thick, and for 10 ft down. The thickness of the
vein is the same on both sides of the shaft, the strike is
nearly east & west, and it looks as if it might run in
both directions for some distance.

As regards location, the mine is a good 10 miles by road
from New Liskeard (which is 5 miles north of Haileybury on the R.R.).
It is a good winter ^{road}, but practically abandoned in summer, as
part of it is under water. After the ice on Lake Temiskaming
and in the White river breaks up in the Spring communication
with New Liskeard and Haileybury is made by water, a steamer
running every day. From the mine to the river is a strong
2 miles, and half of this distance is through a swamp,
and is not a wagon road in summer. Thick timber, however,
lines the trail and a good corduroy road could be made
for a few hundred dollars. Thus in summer ore could be
hauled 2 miles to the boat, and in winter 10 miles to New Liskeard,
and supplies brought in either way the same.
There is plenty of fuel and water.
It will be rather a wet mine, and a good pumping

outfit will be necessary, as the vein eastward strikes off into low land. 5

The location of the property is certainly not in its favor. If it could be had for \$50,000, with cash payments on the same terms, it would not be so bad. Would you be willing to pay monthly installments of say \$2,000, or \$3,000, with absolute control of the working of the mine and shipping of ore, providing you receive a clear title to the property when \$50,000. have been finally paid? With of course the privilege of dropping the work and removing machinery if mine is worked to a loss for 3 months, in which event there would be no further payments.

I will present such a plan to them if you approve of it, and I think in time they will come down to it, after perhaps getting tied up with one or two more promoters.

When the Gillis timber berth is thrown open there are going to be some first class cobalt mines to be had. I have seen beautiful pieces of ore, equal to Bucknell's, from veins in this prohibited section. Before this section was withdrawn a few claims had already a little work done on them. The rich places are all pretty well known by prospectors and fire-rangers, and bloodshed is predicted if the land is thrown open in the usual way. When everything is settled, however, there will be some rich cobalt veins offered for sale, and much more accessible than Bucknell's.

On my way to Latchford tomorrow I shall stop off at Cobalt and visit Woodworth's mine again.

Respectfully, Horace M. Wilson.

THOMAS A. EDISON, President.

W. S. MALLORY, Vice-President.

J. F. RANDOLPH, Secretary-Treasurer.

EDISON CHEMICAL WORKS.

TELEPHONE "86 BLOOMFIELD."

SILVER LAKE, N. J., 3/6/06.

Mr. T. A. Edison,

Ft. Myers, Florida.

Dear Mr. Edison.

The rental on the lands in the Township of Blizard are now falling do and I would like to know whether or not you want to continue the lease on these properties which are about the one upon which we drilled and the same as the ones we paid on last year after we took the matter up together.

Also we have received a note from Hoggson Bros. relative to putting in the window screens and I write to know whether or not we should allow them to put them in.

Yours truly,

Dont want Hoggson Bros to

put screens in

arrange with Randolph to get

the money to pay up on the

whole of the Blizard

properties

Kindly answer as once as tempus fugit.
 Everything O.K. here. I am building pretty well
 up. Old iron process under way.

Darby Mine,
Latchford, Ont.
May 6, 1906.

Mr. Thomas A. Edison,
Orange, N. Y.

Dear Sir,

The ice in the upper half of Bay Lake broke up a few days ago just before the boat arrived, and we are now using it. The melting of the great quantity of snow and some heavy rains have made the road very bad and most of the men are at work road making and bridge building, as considerable work will have to be done before we can haul in the boiler and compressor.

I am still sinking in Shaft No. 2. It is now down 36 ft. During the last foot or so the calcite has become very much broken up and discolored, and there may possibly be a change taking place in this vein matter.

Last week a fine showing of bloom and calcite was exposed upon putting a shot into a crack on an outcrop some 300 ft. east of Shaft No. 1 and close to the north boundary line, and the vein evidently dips and extends into the claim to our north. We are now stripping and trenching to follow it further back onto our property. The ground is still frozen in many places, but a few warm days now will soften it all up. The snow has practically all gone except a patch

live' and there. This morning, however, it is much ⁽²⁾
colder, and there were some snow flakes in the
air. It is still pretty wet getting into the mine
from the river, and I should not advise your
coming up here for a couple of weeks yet.

The beaver-meadow is completely flooded, and I cannot
prospect for any wad in it until the water drops.

Prospectors are pouring into the country every day,
and a large number are going away up the Montreal
river. Many of them are locating claims on which
blom has been found and many samples have been
brought to me and shown me at Latford and
Hartleyburg, but I have seen nothing yet worth
following up. I shall keep track of all these
new prospects however, as development work will no
doubt show up something on a few of them.

Now that the river is open and the boat running I
will be able to keep you posted every few days.

I am,

Respectfully yours,

Horace M. Wilson.

Darby Mine,
Litchford, Ont.
May 18, 1906.

Mr. Thomas A. Edison,
Orange, N. Y.

Dear Sir,

The Wapasing Mining Co., (Earle) is smelting around here, and the manager of their big properties at Cobalt, Mr. Linney, was over here a couple of days ago and has put two men at work stripping and trenching on "L. O. 3," the third claim due west of us. They have already uncovered a crack showing bloom along the surface for some 200 ft. It is evidently a continuation of the same leads that run across "J. B. 33," "J. B. 34," "J. B. 35," "L. O. 3," and "J. S. 61." "J. B. 34," "J. B. 35," "L. O. 3," and "J. S. 61" are all for sale and if Linney finds much ~~on~~ "L. O. 3" his company may gobble them all up. In a talk with him he remarked that the persistence of the seams and bloom across all these claims was a most encouraging sign, so he is evidently "on" to this section.

I have been examining the Richardson-Ferguson claim "J. B. 34" again, and now that the snow & ice have gone all their stripping & trenching, done last fall and

early in the Winter, is well exposed. They certainly ⁽²⁾ have a remarkable showing of bloom, and the seams can be followed practically right across the property for 1320 ft. Along the northern slope of the hill, at the N.W. corner of their property, there is a great wall of rock (diabase) forming a contact with quartzite at its base. Last fall they sunk a hole some 10 ft. deep along this contact and shoveled out quantities of waste. I was over looking at the place this morning but the hole is still full of solid ice and nothing can be seen. This same contact runs all along the north side of our mine, but unfortunately is just across the line on "J.S. 53." This latter claim you also ought to have, as it would give entire control of the north slope of this ridge. Our vein #4 runs off down the hill, turning to the N.E., and its continuation on this property shows some good bloom and calcite vein matter.

All along the northern slope of this ridge at its base, and contained in the two claims "J.B. 34" and "J.S. 53" is a long narrow swamp. The northern slope plunges down into this, forming an almost perpendicular wall in many places from 50 to 75 ft high, and along the

bottom is the quartzite contact along this elevated swamp, ⁽³⁾
which is itself some 70 ft or more above the beaver-meadow.
Our vein No. 1 in which so much bloom and wax has
been found and the veins on "g. B. 34" all dip towards
the north, towards this contact at the foot of the
hill. The main body of ore may be down there, in
"g. S. 53."
I hope you will come up here as soon as
possible and see just what the lay out is here
before the Earle people get an option on everything.

Write me a day or two ahead if possible so I can
be down with the boat at Litchford to meet you.

Look out for the crowd on the train from Toronto up.
If they thought you were going to look at either of
their adjoining properties they would wire ahead and
head you off.

I have hired five or six more men and am
pushing the work hard, and getting a place cleared
for the boiler and compressor, and having fuel cut.

Respy yours,

Horace W. W. W. W.

Darby Mine,
Litchford, Ont.
June 13, 1906.

Mr. Thomas A. Edison
Orange, N. Y.

Dear Sir,

file

I have just been over this morning examining L. O. 3" again, the third claim west of us. They have got a very fine showing. The seam has been followed by stripping (in some places 8 to 10 ft. of earth on top of the rock) for some 500 ft., and it shows bloom the entire length. In some places solid chunks of bloom have been shovelled out and mixed with it is considerable decomposed ore. The walls in places are 3 ft. apart and quite perpendicular, and the vein matter at the bottom (10 ft from surface) is over 2 ft. wide and carries ore all through it. In one place there is over 3 inches of solid ore, which they have just reached, about 10 ft from surface. Mr. Linnay, the manager of the Rippling Mining Co (Earle), has an option on it until July 1st. The assays so far have showed only a trace of silver, and one of Linnay's men told me this morning that no doubt

Linney would sell it. I believe Ferguson has ⁽²⁾
the controlling interest in the claim. The Earle people
have a large amount of cobalt on their 900 acres
around Cobalt, and probably will not hold on to this
mine if it does not prove a silver property.
You certainly ought to have it. I hope you
will be up here soon, so that you can see
exactly what it is like.

Respectfully,

Horace W. Wilby.

Cobalt - Gen

Sudbury, Ont. July 21st., 1906.

MEMORANDUM OF INFORMATION FOR WEEK ENDING JULY 21st., 1906.

Returning from Cobalt yesterday I find that Camp in far better condition than a Month ago. At that time it was in a very discouraging state as no finds of any value had been made in the Camp except on Lands already taken up. Since then, however, the a number of very good finds have been made in the Neighbourhood of Portage Bay and the general tone of the camp is improved in a marked degree.

Your Mr. Wilson, in charge of your Mine at the Head of Bay Lake will have undoubtedly sent you word regarding the finds of a more definite character than I can give you. I expressed the opinion two years ago that this Locality would show up some good finds. The Ore I think will run more to the Cobalt variety than to the Nickolite and Silver Ores of the immediate vicinity of Cobalt Lake.

Mr. T. E. Williams of Thessalon writes me that he has found Cobalt and Silver in his Vicinity. I have not seen the Location nor samples as yet but I intend going there immediately and verifying the report.

The Loon Lake Iron Mines at Port Arthur are changing hands. I think that eventually they will belong to the McKenzie Mann combination.

There seems to be a great activity in Iron through this District. But who the real Buyers are I do not know. It is evident someone is absorbing all the good Iron Properties in this part of Ontario.

There are a number of Smelters projected for the smelting of Copper and Cobalt Ores. It is proposed to place one at Latchford, a Site has already been secured from the Government. Another one is proposed at Diver, a Station on the T. & N. O. about half way from Cobalt and North Bay. A still further one is proposed at North Bay for the Treatment of Copper Ores. Another one is in the course of erection at Bruce Mines also for the treatment of Copper Ores.

2:--

There are a large number of small deposits of Copper Ores of high grade between here and the Sault, which can be mined to a profit if economically handled. I presume it is the intention of the Bruce Mines and North Bay people to buy such Ores from the Miners or treat them on a Commission Basis.

Mr. Hyde, Metallurgist for the Balbeck Refining Co., New Jersey, is here in Town. He is accompanied by Mr. Chapen who is interested in the Darrah & McKinley of Cobalt.

The Hamilton Nickel Co. who own a large number of Properties on what is known as the "North Range" have lately had some new blood infused into them, I understand it is German Capitalists. Nothing definite however, has been done so far.

I have received samples from a new Hematite Iron Proposition opened up near the Sault which is a very high grade ore.

Some Gold has been found near Ville Marie, in Quebec, Samples of which I saw. They were extremely high class free gold quartz, but it is my opinion and has been the experience of all free gold bearing finds in this country so far, that they are never of any extent, generally small lenses, so although their samples are very rich I do not put much dependence in this field.

In my opinion considerable Cobalt Ore, that is smaltite will be found yet in Northern Canada, but I do not think that the Silver will accompany it.

A Number of Nickel Properties have been optioned or changed hands lately in this vicinity. Why I do not know unless it is the Hamilton People strengthening their holdings.

Yours truly,

JN Haight

Darby Mine,
Litchford, Ont.
July 22, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

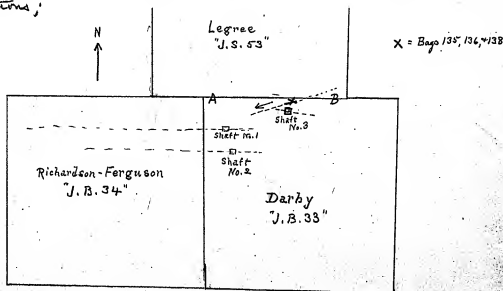
Dear Sir,

By same mail I am sending you
Bag 138, containing further samples from the same
seam that Bags 135 & 136 were taken from.
We are evidently getting into a good vein of ore.
These chunks are from within 5 ft. of the surface.

As I have before written, we discovered the seam
in an outcrop, 25 ft. north of Shaft No. 3 and
within 6 ft. of the north boundary line, which runs
along the slope of the hill. Upon breaking down the
rock, the walls and the calcite filling the fissures
were found to be saturated with bloom, and 2 ft.
from the surface the vein-matter became mineralized
with the crystals shown in Bags 135 & 136.

Upon sinking further, the true walls of the seam were
found to be over 3 ft. apart, and the space between
them filled with solid calcite and calspar, carrying
a gangue studded with crystals. A foot further down

and along one side of the calcite we have got ² into a loose earthy seam some 6 inches wide and containing the loose eroded chunks of ore which I am sending in Bag 138. Unfortunately the vein is dipping sharply under the line into the Legree claim, and the proper way to get at it would be by a tunnel at the foot of the hill in this other property. We therefore cannot follow the ore much deeper at this point of discovery. The strike of the vein, however, seems to be S.W. and we are now stripping and trenching to locate its continuation further from the line in our property. The following sketch shows the relative locations:



Line A B runs along the top of precipitous side of hill. Bottom from 50 to 75 ft. below in Legree claim.

We are now 30 ft. deep in Shaft No. 3, following (3)
down the earthy seam of wad, cobalt, and copper. After getting
down say 40 or 50 ft. we can drift along the foot-wall
in a N.W. direction and will undoubtedly cut into the
cobalt vein which is now so near the line, but which is
striking S.W. into our mine, as indicated by the arrow. At
this depth we ought to get into a good vein of solid
ore if the seam has any permanence. I am greatly
encouraged over this new find. As soon as we
can get an air drill running in Shaft No. 3 we
shall be able to make rapid progress.

I have engaged a man at \$2.50 per day to
fire and run the compressor, and he is now assisting
in setting up the plant. He has had experience at
Copper Cliff, and set up some of the machinery in
other mines up here.

I am,
Respy'g yours,

Horace M. Wilson.

Darby Mine,
Litchford, Ont.
Sept. 2, 1906.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

By same mail I am sending you Bag 140; samples from the 2 ft. seam close to our north line. These were taken at a depth of 8 ft., and the vein is strong and well defined. I have not done any work on it since sending Bags 135, 136, & 138, as I have been planning to drift on it from the bottom of Shaft No. 3 when down 60 ft., but I have now decided to follow it down until we get under the line and then drift or open cut along the strike. I have now taken out about one ton like samples in Bag 140. Are these argents of smallite or are they mispickel carrying cobalt? They seem to be rich in cobalt. Does the vein carry any silver?

Shaft No. 3 is now down 48 ft., and the loose condition of the seam still continues, carrying earthy matter and iron oxide. I find that the samples in Bag 134, sent you on July 15, are not cobalt.

The cobalt vein in Shaft No. 3 still continues, and carries

small stringers and patches of good malachite, (2)
There is also considerable copper still coming up.
We are using the McManis 2 1/4 drill in Shift No. 3.

In Shift No. 2 we have begun sinking again with the No. 5 Ingersoll drill. The other No. 5 drill is at work in the tunnel, which is now in 20 ft. and at a 60 ft. level.

I think it would be well to put on a night shift, and drive the work continuously. It will, however, increase the expense considerably, and perhaps you would prefer to keep on a day gang only as at present until we find something. A night shift will require another fireman, another blacksmith and helper, and 3 machine men and 3 helpers.

Enclosed please find a letter from a Mr. Travers, diamond drill contractor. He refers to some work he did for you around Sudbury. I have written him to come up here some day and look over the ground, and give me a price.

I am,
Respectfully yours,
Horace M. Wilcox

Collect.

SEP 1 1898

Letchford, Ont., Canada.

Thomas A. Edison.

If you will take 30 or 40 tons of whatever is on
hand, can get Glendinning for 40 cents F. O. B., New York.

H. W. Wilson

Postal.

9/13/98

Billed

all right will take
thirty or forty tons
Edison

Darby Mine,
Lathford, Ont.
Oct 7, 1906.

Answered
Oct 11, 1906

Mr. Thomas A. Edison,
Orange, N. J.

Tell him to buy
the core in
Columbia
2

Dear Sir,

By Express today I am sending
you Box 162, containing two heavy nuggets
of ore from the earthy seam in the open-cut
near the north line. At one time there must
have been a fine vein of cobalt in this seam,
but as far as we have opened it up (20 ft
in depth) the 10 inch seam is filled with wad and
red iron-stained earth and decomposed calcite,
while mixed with them are these chunks of
ore. Parallel with this seam and between it and
the foot-wall are the veins of calcite and crystallized
ore - two large pieces of which I sent you recently in
a box. These present veins of crystallized ore and
these loose decomposed nuggets probably unite down
deeper. It is certainly a remarkable and most
interesting showing. I am getting away from the
north line as fast as possible, following the strike
in a south-west direction.

I have been obliged to buy from the Rand-
Genesee Co., at Cobalt, two arms & clamps & columns

for the two big machine drills. Only tripods ⁽²⁾
came with them, as you probably did not use
them for underground work. They cost \$43.⁰⁰
each, but will quickly pay for themselves as sinking
and drifting cannot be done properly with a tripod.
I disliked to go to the expense, but saw that it
would soon cost more than that if we kept
on with the tripods. We also ought to have
an arm for the column of the small machine which
the McKiernan Drill Co. sent. For shaft sinking a
machine mounted on a column or bars will work
all right without the arm, but for tunneling and
drifting the arm is essential. I find that the
Rand-Jencks Co, at Cobalt can supply an arm for
\$8.⁰⁰ and which is their factory price. The McKiernan
Drill Co, write me that they can supply one
for \$6.⁰⁰ although their regular price is \$8.⁰⁰
However with freight, duty, and delay in getting it
it would be cheaper to purchase it from the
Cobalt people, and with your approval I will
do so, as we shall soon be drifting with the
small machine.

I am,

Respectfully yours,

Harance Ch. Wickham.

[ATTACHMENT]

Will 162

Contents 11.04 % Cobalt

9.96 % Ni

1.04 % Bi

6.96 % Sand

No Silver

Cobalt - Gen

Sudbury, Ont., Nov. 28, 1906.

T. A. Edison Esq.,
Orange, N.J.

Dear Sir:--

We had a heavy snow storm here Monday, which puts an end to the Prospecting in this section, so that from now till Spring time I expect we will have the usual bunch of rumors and deals.

The past season, although it showed remarkable activity in Mining was not marked by any new or wonderful finds. A lot of fields of value were explored and developed but I do not think any new fields of any value have been found.

Of course everything here now at present is Cobalt, it is all that you can hear, and Cobalt Stocks, and Combinations, and Deals will be the main thing this winter.

Quite an interest is being taken in smelting and refining in Ontario, and a great deal is being talked about the matter but not much done. Considerable work has been done on the North Bay Smelter and also on the Hydro Electric one at Sturgeon Falls. Their principal object seems to be Cobalt Ores and now that the Guggenhiems have become heavily interested in Cobalt, I would not be surprised to see them operate a Smelter in that District too.

The Oil men of the Manitoulin Island seem to be quite enthusiastic with the development of the Oil Area at Manitowaning. However, I do not think this area is very much, therefore I do not think that they are going to have anything very wonderful in the form of an Oil field there.

At the present price of Copper almost anything in the line of a Copper prospect can be worked, and so therefore we have had considerable excitement and exploitation on Copper through here this summer. And it looks now as if several propositions will be worked this winter and next spring which will pay at the present rate.

A survey party is to be sent this winter to locate a final location for a Railroad which is to be run North from Sturgeon Falls towards Temagami Lake. This road will tap some considerable Ore Bodies which lay in the district, principally Iron and Iron Pyrites. There are some large Mundic deposits up there which contain small percentages of gold which can be worked profitably. These are

2:-- T.A.E.

at Emerald Lake and although they have been known for a long while were not worked on account of their being such a distance from a market.

I will close this letter by saying that I think next Spring will see the greatest activity in the Mining that we have ever experienced in Canada, and from the amount of country which has never been explored in the slightest and which will be explored next summer I will look forward to discoveries of a large number of new and valuable finds, and I can say that in my opinion anyone interested in Mining business most assuredly had better get in touch with this section another year.

This is my last letter of the season as requested.

Yours very truly,

L N Haight

[illegible]

If the regular fall or summer of the, because of
high water, I caught a number of small fish, mostly
Red Drum and ^{white} crabs, also a few small ones
of snappers - But of nothing more than 20 quarts

the low-grade iron is an enormous quantity -

I might also inform you so that there may be no

Question in Prophets - Not I do not want or want of office
Prophecy - The Lord's religion is that he is the first among
gods, has faith of a good enough to work with us and
perhaps that we are the first of the Lord's people, the first
a very ancient name.

The "Nileal" despatch, for a portion of the argeal are I believe, now chosen at morning eight - "Sawney" only
great and pleasant day, as far as the early part of the
month the "game words" he said.

MS. Leaves in the promise is chiefly to get the things
a sort of progress which I feel are worthy of the place, and
in the number of practical men and men, largely to be
tradition. Cap. 1st -

I have what I have written will not be sent out
in the system I am for

[Faint handwritten notes at the bottom of the page, possibly bleed-through from the reverse side.]

James W. B.

[ATTACHMENT]

Cohart - TAE

Ea Charters

PO Box 92

Sussex

New Brunswick

Canada

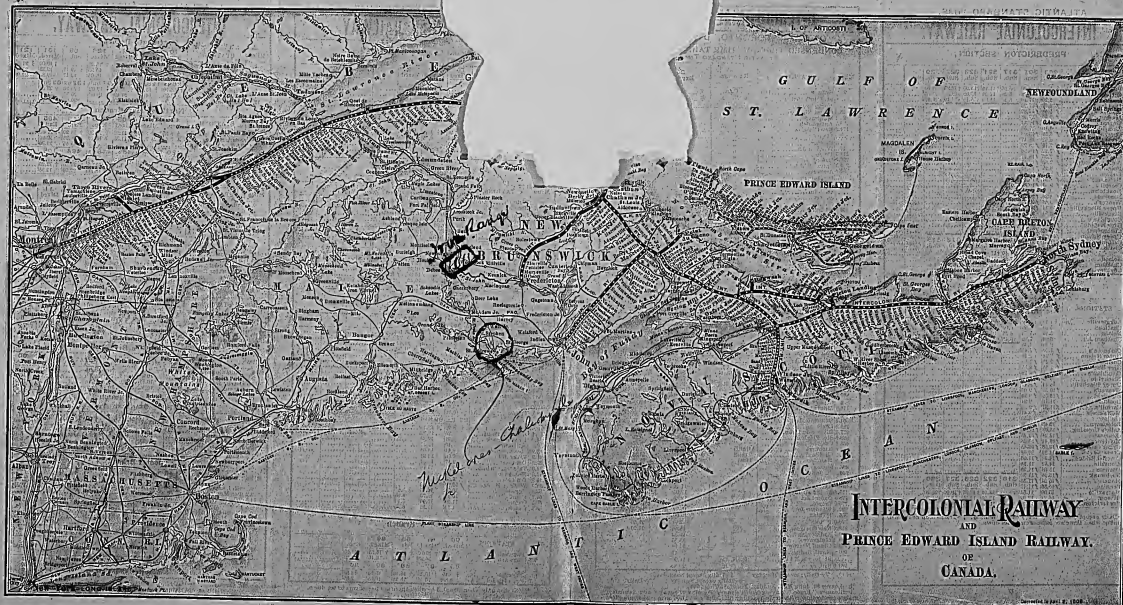
John of Dec 11th Recd. I would be glad if
you could mail small samples of each
kind of rock you may have or I will
come for Cohart. I shall probably
send a geospecter up to the province
next summer & I shall have him
call on you - with many thanks
for the information recd. Yr,

Dear yours truly

7c

5

[ATTACHMENT]



Darby Mine,
Litchford, Ont.
Dec. 12, 1906.

Mr. Thomas A. Edison
Orange, N. J.

Dear Sir,

I believe my arguments are beginning to have some effect, for two of the larger mines now are seriously considering the disposal of their cobalt. One of them, the O'Brien Mine, adjoining Ginnins and McPising, is now out of litigation. They have got some great veins of smallite running low in silver, and I am trying to make a deal with the manager for about two car loads which they have already tagged up.

I am also dealing with the Brethway Mine, which is now under entirely new control, the manager being F. C. Loring, an American from Massachusetts and an old mining man. This is the mine from which Brethway a year ago or more almost smothered the International Copper Co. of Earle, with cobalt, having a contract with them for the entire output of cobalt ore up to Nov. 1905. Since then this vein has remained unworked, but Loring is now anxious to realize something from it. The ore which has been taken out has left an open cut some 200 ft. long and 10 to 20 ft. deep with a shaft at the west end about 15 ft. deep. The vein runs from 3 to 6 inches wide, besides numerous stringers of ore. By some mail I am sending you samples in

Bags 171 & 172. From a certain point westward⁽²⁾
the ore runs low in silver (Bag 171); as the work
proceeded along the strike eastward the silver values
greatly increased, and their present shaft is now down
100 ft. and in ore running 3000 g; and over, Silver.
The sample in Bag 172 is from a short drift at the
50 ft. level which was run from the rich ore shaft
westward towards the low grade ore; and may possibly
carry more silver than the sample in Bag 171 which is
from the open cut in the cobalt part of the vein.

Mr. Loring himself suggested to me that perhaps some
arrangement could be made with you to lease^{you} this
portion of the vein to the west of their shaft. They
have plenty of power, and could supply all the air
necessary. If you would like to make him an offer
on some royalty or percentage basis I think he will be
ready to make a fair deal. It looks like a good
opportunity of getting hold of a lot of cobalt.

We are now timbering No. 3 shaft to make
it safe for further sinking.

I am,
Respectfully,
H. C. Wilson

Cobalt, Ontario Dec. 19-1906

Thos A. Edison

Orange. N.J.

O'Brien Mine has 50

Tons remaining about 180 tons

silver can ship at once

Wm. F. Adams -

Kilom -

Will purchase O'Brien
ore on terms given you
ship to Ed. Cox

Ed. Cox

Edison

**Mining Exploration Company of New Jersey and Related Records
Thomas A. Edison Files - Correspondence (1907)**

This folder contains correspondence and other documents relating to the Darby Mine and other cobalt-bearing properties in the Sudbury district of Ontario. The correspondents include Edison and Horace M. Wilson, mining scout and manager of the Darby Mine. The letters deal with Edison's decision to abandon his search for cobalt and close the Darby Mine and with negotiations for the sale of the property and machinery. There are also letters concerning operations at the mine and the transmittal of ore samples.

Approximately 40 percent of the documents have been selected. Most of the selected items contain Edison marginalia.

Darby Mine,
Litchford, Ont.
Jan. 3, 1907.

Mr. Thomas A. Edison,
Orange, N. Y.

Dear Sir,

In reply to your letter of Dec. 31st I would say that I spoke to Mr. Glendinning, the president of the University Mine, some three weeks ago regarding the rebate on the shipment of ore, and also brought the matter to the attention of Mr. Adler, the manager, who said he would attend to it. Since then the mine has been sold, Adler is now manager of the Foster mine, and the new manager, Mr. D. McCollom, says that everything relating to the matter is in the hands of the head office at Toronto. All the book-keeping is done there and all the old correspondence is there. I shall see McCollom again in a few days and if he has received no word from Toronto I will call there personally and straighten the matter out with them.

Wishing you the Compliments of the Season,

I am,
Respectfully,

H. C. Wilson

P.S. Enclosed please find -
1. - 100 lbs. of
2. - 100 lbs. of
3. - 100 lbs. of
4. - 100 lbs. of

Cobalt. Ed. House.

Jan 11-1907

Mr. Wilson

Latchford. Ontario Canada

~~Do not buy any more
Cobalt ore and cancel any
purchase you have already
made.~~

Edison

Chas. Edison

Sent via W.V. & Co. Jan. 10-07
11:15 P.M. Geo. Allen



Answers
Jan 23-1907

Darby Mine,
Lafayette, Ont.
Jan. 15, 1907.

I don't want to run
Mr. Thomas A. Edison, any drift until
Orange, N.Y. I am very certain
we are below water level.

Dear Sir,

Your telegram stating to purchase no
more cobalt ore and to cancel all orders ^{was}
dearly received, and I have notified the managers of
the various mines with whom I have been dealing.

After many delays in getting Shaft No. 3 timbered, owing
to the loose condition of the sides, and the amount of
sealing and mucking required, we will now be
able to proceed faster with the sinking. My night-
drill-runner also left me unexpectedly, delaying the work
for nearly a week until I could get a man from
Michigan.

When at the Laboratory I told you, on a guess, that from
top of hill to water-level was about 135 ft. I was only 15 ft.
out of the way. By careful measuring with the instrument I
find it to be 100.1 ft. We are now down 72 ft. When
we reach the 100 ft. level I think it would be well to run a drift
over to vein No. 4 - a distance of 40 ft.

I am, Respectfully, H. C. Wilson.

Darby Mine,
Litchford, Ont.
Feb. 8, 1907.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Regarding the rebate on the silver and freight of the University Mine shipment, the manager informs me that the matter will be settled at once. Owing to the change in the ownership of the mine it has been difficult to get this matter straightened out till now. This mine is now in the hands of Timmins and his associates. They have about 24 tons of ore bagged and ready to ship of the ^{same} grade as the former shipment, and Timmins is willing to let you have it on the same terms as before. I hope the telegram received from you a few weeks ago telling me to buy no more ore is only a temporary suspension.

The Right of Way Mining Co., working along a narrow piece adjoining the railroad tracks opposite the La Rose Mine expects to get into a considerable body of cobalt before long and I can doubtless make a deal with them if you want further shipments. Also, the Cobalt Lake Mining Co., are opening up continuations of the Nipissing

veins, and will probably soon have ore to dispose (2)

7. Mr. Adler, formerly of the University Mine and from whom I obtained the first shipment, is now manager of the well-known Porter Mine, and he was getting out a car-load of good cobalt ore for me when I cancelled further purchases.

The Buckwall mine is now being developed by a company, who has installed a plant. The manager, Mr. Mitchell, will soon have a car-load to dispose of and was looking forward to making a shipment to you.

The Little & Van Hise Mine is now being further developed by themselves, and a plant is being installed. Shipments are being made to Swansea, I believe.

Holland arrived on Wednesday and his boxes today. We are now all praying for 40° below, but the thermometer persists in staying at 20° above.

Please let me know as soon as possible if you want the above-mentioned 24 tons of University ore; otherwise they will mix it and ship it with their higher grade ore to the smelter.

I am,
Respectfully yours,

H. W. Wilson

Wilson -

Answered

Feb. 12-1907

I shall ~~not~~ need any more
Cobalt ore from any source, ~~as~~
I am so disgusted with ~~the~~
Timmins or the others. Their utter
failure to understand the situation
& the uncertainty to getting an
immediate supply at a price I
could use it & make a cent, that
I have stopped constructing & abandoned
Cobalt works. I will not in the
future use it. I am progressing
towards accomplishing results
by other means. Regarding
Darby mine, I intend sinking
a little below water level
drifting over to vein

2

& if ~~not~~ silver is found
to abandon it —
Do you better find out
if you could sell the
outfit for about 60%
or more of its dead
cost in case we abandon

Edson

Answered
May 23-1907

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

The past two weeks have been the worst we ever had up here, snow & rain every day, and we have had great difficulty in keeping the men at work in the shaft. The hoisting of an average of 40 barrels of water every shift has greatly delayed the work. The total depth of shaft, up to last night, is now 136 ft.

I dislike to speak again of a power hoist, but it is really needed very badly. With a small underground gensies hoist installed at the 60 ft level we could hoist water and much out in half the time, which would result in much more drilling every shift. The wages of one man would be saved, and together with the time saved all around the hoist would soon pay for itself. It could readily be sold at Cobalt at any time for half price. We are now hoisting by hand 76 ft. on a 7 inch drum, and have got 14 ft. more to go. From this depth of 90 ft. two drifts should be run; one to the south of at least 25 ft. to intersect the original vein in this No. 3 Shaft which we left outside the south wall at the 60 ft. level, and the other to

Barby Min.
Litchford, Ont.
May 19, 1907.

Telegraph
Buy hoist if not
over four hundred
Edison

(2)

the north to intersect Vein No. 4, a distance of
500 feet and perhaps more, depending upon the dip of
the vein at this depth. There will therefore be
at least 150 tons of rock to hoist in addition to
the water, after we finish sinking. As all this can be
accomplished in half the time with a \$400.00 power-
hoist the saving in wages will more than pay for
it. If you agree to this please telegraph me, as it
will take a week or ten days to get it from Cobalt
and installed, and every day counts.

By same mail I am sending you Bag 185,
containing a sample of the gabbro from the bottom
of the shaft. It still continues to be filled with
specks of iron pyrites (?). The peculiarity of this
sample, however, consists in the streak or band of
lighter colored rock running through it, about an
inch wide and which has just appeared.

I am,
Respy yours,
H. M. Wilson.

Darby Mine,
Litchford, Ont.
May 26, 1907.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

We have squared this last week
to 139 ft. 6 inches. This leaves $10\frac{1}{2}$ ft. more sinking
to do.

I was greatly pleased to receive your telegram
regarding the hoist, and gave the order at once
to the Albi-Chalmers-Bullock Co, at Cobalt, as
I found I could get the same machine for
ten dollars less from them than from the Rand-Jencks
Co. The price is \$340.00 delivered at Litchford,
and I expect it will be there tomorrow or Tuesday.
The only additional expense will be for a Sheave wheel
and bearings. I shall not have to buy steel cable,
as that which came with the derrick is just right.
We shall do our best to get the hoist up to the
mine and installed and running by the end of this
week.

I am,
Respectfully yours,
H. C. Wilson

Darby Mine,
Letchford, Ont
June 23, 1907.

Mr. Thomas A. Edison
Orange, N. J.

W. H.

Dear Sir,

Shaft No. 3 is down 150 ft, and the sump for water is nearly all blasted out. There are three more holes to drill to finish the east side of the sump, and drifting will then begin; Monday night or Tuesday morning.

Unfortunately my two drill runners are going to leave this week. They have got their little farms down east somewhere and have got to put in some work on them. Good machine-drill men are very hard to get up here, all the miners are complaining of the scarcity of them. If we have to break in new men it will retard the work somewhat, but I am on the track of two good men that I hope to secure.

The mortgages and fees are now very bad. Many prospects are being driven out of the land by them.

Respectfully,
H. M. Wilson.



Aug. 19, 1907.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

In my negotiations for the sale of the mine two different parties have intimated that they might buy it on the \$20,000. basis providing it could be made on time payments, say \$10,000. down and \$5,000. every month. Would you care to make this arrangement?

I still have hopes that the North Bay people will be able to raise the entire amount cash.

Please reply to Litchford.

I am, Sir, Very yours,

W. Edgar W. Brown.

[ON BACK OF PRECEDING PAGE]

I would accept the \$250.00.

1000 a year + 5000 Every
month. if the mine is worked as
security of the whole transaction
carried out through a Toronto
Trust Co or Bank



Aug. 30, 1907.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

If everything goes
through all right I expect to have
the \$25,000. deal put through
the coming week.

I am dealing with several parties
and one of them thinks that
going down and seeing you ^{the}
might be able to get the price
trimmed down. I have told them
no that it would be useless,
and that you would only
refer them to me, and that they
would leave their ^{offer} up for nothing.

I have received permission in

writing from the owners of
J. S. 53 to continue across
the line into their property,
and Harris is pushing the drift
as fast as possible. We will
make another 7 or 8 ft. this
week.

If by the end of next week
 the \$25,000 deal is still
 hanging fire I will make
 some compromise, but I will
 have every reason to believe
 that we can get the full
 contribution of the adjoining
 claims is being effected.
 Puffy gone, Hammond
 H. C. Wilson.

P.S. I shall be back at the mine
on Monday when I expect to meet
some men up there to examine it.
Thine

7
Dorby Mine,
Litchford, Ont.
Sept. 2, 1907.

Mr. Thomas A. Edison,
Orange, N.J.

Dear Sir,

We have struck a fine looking
vein from 7 to 10 inches wide in the north
drift, and carrying smallite and what looks
like silver or some compound of it, although
it may be only bismuth. By same mail
I am sending samples.

Please let me know at once whether you
still wish to sell out or withdraw the
mine from sale for the present.

I am,
Respectfully yours,

H. M. Wilson

P.S. Samples are being sent by Express
instead of by mail. Hmw

Darby Mine,
Litchford, Ont.
Sept. 9, 1907.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

Since writing you on the 28th inst. that we had struck the vein in the north drift and sending you a small box of samples, I took down to the Laboratory a larger box of much better samples from the vein, fearing that if sent by Express there would be endless delays. We encountered the vein 20 ft. beyond the north line, and where the drift cut it its direction is 21° S. of west. The strike of the vein on the surface, however, indicates that this angle rapidly increases towards the S.W., and I should judge that 40 ft. or less of drifting along the vein would take us back into the Darby Mine. I told the owners of this property that we are now in that if we drifted back to our line and opened up this section of the vein for them that we should expect to retain whatever ore there was and they have agreed to it, provided we take no ore by stopping or sinking.

The vein is from 7 to 10 inches wide, and, as the samples that I took down show, is well mineralized with smallite, niccolite, and bismuth. While waiting for the

New York train at Toronto I had an assay made ⁽²⁾
by Messrs. Heys & Son to see if the ore carried any
silver. Enclosed please find their certificate.

It is certainly beautiful looking ore, and as we have
struck it at just about the water level it may
be that from this depth down the silver value will
increase. It is some satisfaction at any rate to
know that a good vein of smallite exists at this
level, and as the fissure can be traced for a mile
on the surface there is every probability that good
ore will continue for hundreds of feet in depth.

During the past week we have drifted 8 ft.
beyond the vein to see if there were any accompanying
parallel veins. We found one, about $1\frac{1}{2}$ inches wide,
consisting of a mixture of calcite and quartz, and
 $7\frac{1}{2}$ ft. north of the smallite vein. It appears to
carry nothing but pyrite, but the quartz might have
some gold in it. By same mail I am sending
samples of it in Bag 198.

We started last night to drift along the main
vein towards the line, and are also continuing the
south drift which is now in 12 ft. but nothing
has yet showed up.

Until I hear from you I am letting negotiations

for the sale of the mine to come to a standstill.⁽³⁾

Do you wish to continue work and open up this cobalt vein, or dispose of the property for \$25,000, or a higher figure? In case you still wish to sell it would be well to keep operations underway until a deal is effected, for when a mine is shut down and the workings fill with water it is not marketable.

The owners of the claim to the north on which we have made the find are naturally highly pleased, and the head man, J. B. Bartram of Toronto, realises that the purchase of the Darby Mine would be a great addition to their present holdings, and is to confer with his associates on the matter.

Awaiting further word from you,

I am,

Respectfully yours,

H. M. Wilson.

[ENCLOSURE]

THOMAS HEYS,
Consulting Chemist

CHAS. H. HEYS,
Chemist and Manager

Laboratory: 124 Yonge Street,

Toronto, Sept. 5th/07

Mr. H. M. Wilson

We hereby certify that we have made an assay
of ore: "Marks"

received from you, finding as follows:

	OUNCES	DWTS.	GRAINS IN 2000 LBS.		Value \$
Gold	0.	1.	4.		1.20
Silver	0.	2.	8.	"	0.06
Copper				"	
Nickel				"	
Cobalt				"	
Lead				"	

Fee \$

Thos. Heys & Son,
Assay and Consulting Chemists

Call Address "Edison, New York."

*From the Laboratory
of
Thomas A. Edison.*

Subject _____

Orange, N.J. September 12, 1907.

H. M. Wilson, Esq.,
Latchford, Ont.,
Canada.

Dear Sir:

Will withdraw mine from sale until we prospect further.
Send sketch top and section, showing position of the two veins and
property lines and shafts and drifts,

Yours truly,
Edison

Original letter mailed to Mr. Wilson.

Mr. Edison's handwriting.

Darby Mine,
Litchford, Ont.
Sept. 15, 1907.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

I received yesterday your letter saying to withdraw the mine from sale and to continue prospecting. According to your directions I shall forward you tomorrow maps showing surface veins and underground workings, &c.

The south drift is now in 15 ft. 3 inches to the last square with the next cut already blasted out. There is no change in the rock so far.

On vein No. 4 (north drift) we have drifted westward along the strike of the vein 4 ft. At the bottom the vein is 20 inches wide; nearly all calcite with stringers and bunches of smallite. It looks much better at the bottom than at the top - 6 ft. above. We are just about at water-level. I believe 25 ft. below water-level the ore would be still richer. We are just about at a depth now where there would begin to be a change in the ore.

Respectfully yours, H. M. Wilson.

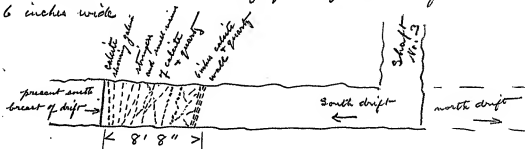
Darby Mine,
Litchford, Ont.
Sept. 23, 1907.

Mr. Thomas A. Edison,
Orange, N. J.,

Dear Sir,

By same mail I am sending you Bags 202, 203, 204, & 205, containing samples from the vein matter in the South drift. This vein matter or series of stringers and veins of calcite and quartz now has a width of 8 ft. 8 inches and the breast of the drift still drills soft. The first indication of a vein was at 18 ft. 6 inches from the shaft, when we passed through at right angles some 6 inches of quartz and calcite, running east & west. A sample of this was sent in Bag 200 a few days ago. Since then the drift has gone through a series of stringers and veins of calcite and quartz for a distance of 8' 8" as stated above. These samples have been taken 2 ft. apart along the drift as indicated by the slips in each bag. The samples in Bag 205 show some galena. This is the innermost vein as yet and dips slightly to the north, whereas the first veins encountered dip to the south. We are continuing the drift, as there seems to be vein matter still ahead. These veins and stringers of calcite

and quartz vary from a knife blade to over 6 inches ⁽²⁾ in thickness. The vein carrying the galena is from 3 to 6 inches wide.



After continuing the drift until sure we are through the vein-matter, do you want to follow these veins down deeper by sinking on them? They now seem to be converging to some point below.

We made 8 ft. in this south drift last week, its length now being 28 ft. 2 inches.

In the north drift we are following vein No. 4 to the westward. We have been using the small drill on this work and working only one shift so are only in 6 ft. There has also been a great accumulation of mud in the 54 ft. of the drift which we had to put the men to work on. The vein still carries ore but it is confined to within two feet of the bottom, the upper 4 ft. being barren so far.

Do you wish me to get another drill runner and helper and work with two shifts on this No. 4 vein?

Or shall I work a double shift on No. 4 and a

single shift on the vein in the south drift?

(3)

If we are to sink on the vein in the south drift a chamber will have to be blasted out to make room for a hand-windlass, and in two or three weeks I shall need two more men to operate it. Also, if the work is to continue for a few months I shall have to get two or three more wood-choppers, in order to get a little wood ahead before the winter sets in. I ought to now have several hundred cords drying, but owing to the uncertainty as to whether operations were to continue I have been keeping everything down as low as possible for the past month or more. If your plan is now to push the work on both Veins 3 (south drift) and Vein 4 (north drift) I will hire the necessary men and supplies. We have, as you are aware, now reached a point in the development that will increase the weekly cost of operating.

There were some men up here on Saturday looking over the work in connection with Richardson's claim west of us. I told them that the mine was withdrawn from sale on the \$25,000 basis, but that possibly it might be had for \$60,000.

I am, Respectfully yours,
H. M. Wilson

[ATTACHMENT]

arranged Sept 27-1907
Samples not received
J. P. Randolph
Wilson after you have gone through
South drift and nothing shut down
the mine here what you can sell the
machinery for - Edison

Wilson Answered
Oct. 2-1907
You better close
Starby Mine,
Litchford, Ont.
Sept. 26, 1907.

things up before you go -

Mr Thomas A. Edison
then leaves a care taker while you are away
Orange, N.J.

Dear Sir, I can close up selling the

With your permission I should
like to get away for two weeks sometime
this coming month in order to go down home
and put the house in condition to rent.

After my mother's death I closed up the
house and returned here to the mine, as I
was unable to do anything about putting
things in order at that time. Now that
operations are to continue here I feel that
I ought to attend to this matter before winter
sets in, and I shall much appreciate a short
leave of absence.

Hoping to hear from you at your
convenience,

I am,
Respectfully,
H. M. Wilson.

P.S. We had our first snowstorm yesterday.

Hunters' Headquarters
Guides Furnished
King Edward Hotel
Armstrong & Kingston, Props.
Good Sample Rooms for Commercial Men

*Answered
Oct. 4-07*

When I want to close down

LATCHFORD, Ont., Sept. 30 1907.

Sell the machinery samples
if I can sell the mine so much
Mr. Thomas H. Edgar, I am going to stop
any further business. right now
Orange, N. J.

Dear Sir,

Tag

Yours of the 27th inst. just
received. Do I understand that
you wish to retain the
property and sell only the
machinery?

If the parties I was dealing
with before you withdrew the
mine from sale will give
twenty or twenty-five thousand
for the mine shall I close
the deal with them?

Both the amers of J. B. 34 west
of rd and of J. S. 53 north of
Lrs were considering the
purchase of mine and plant.

Hunters' Headquarters
Guides Furnished
King Edward Hotel
Armstrong & Kingston, Props.
Good Sample Rooms for Commercial Men

LATCHFORD, Ont., 190

at figures mentioned.

I am,

Respy yours,

H. C. Webster

Darby Mine,
Litchford, Ont.
Oct. 1, 1907.

Mr. J. F. Randolph,
Edison Laboratory,
Orange, N. J.

OK 702

Dear Sir,

I received word yesterday from Mr. Edison to shut down the mine. I am very sorry, for we have got to a depth now where we know there is ore, and it will likely get better and richer in depth. This decision has come most unexpectedly, for his last orders were to withdraw the mine from sale and continue operations. As we were then low in about all kinds of supplies I got in about two months' supply of groceries, hay, oats, blacksmith's coal, &c. Some of this I may be able to dispose of.

Please send me a cheque for another thousand dollars to close up the various outstanding accounts and to meet this week's pay-rol. As there is considerable to be done before leaving the property I shall have to keep some of the men on next week also, but the above amount will probably cover all further expenses.

Lent in J. F. R.

I am,
Respectfully,
H. C. Wilson

H. C. Wilson

PHONE MARK 2415

CABLE ADDRESS "BARTRAM, TORONTO"
WESTERN UNION CODE

SOLICITOR FOR THE TRADER'S BANK OF CANADA
KING AND SPADINA STREETS

J. Bogert Bartram

BARRISTER, SOLICITOR, NOTARY PUBLIC, ETC.

18 KING ST. WEST

TORONTO, Ont., 2nd, 1907

H.M. Wilson, Esq.,
Darby Mine,
Bathford, Ont.

Dear Sir:-

Your favor of the 1st inst. to hand this morning. I thank you very much for same. I was sorry, however, to hear of Mr. Edison's decision. I think it very possible that our syndicate may make some arrangement with you along the lines suggested in your letter and I shall put your communication before the syndicate on Saturday and at once communicate with you as instructed by them. I should be glad if you would let me know, in the meantime how the vein has shown up as developed by you indicating back to your property. You might also let me have, if you will, a statement of what the monthly expenses would be of running the plant that is now on the property, the wages of the men and other expenses being placed separately, and if any of these expenses can be cut down, I should be glad to know in what manner they could be cut down.

Yours truly,

J. Bartram

Could you give me a report on Lewis
x report report on Darby as that
will assist on my part at my
end.
JWS

CALL ADDRESS
"MONISCOTE"
NEW YORK-LONDON
TORONTO-COBALT

TORONTO OFFICE
TRADERS BANK BLDG.

Chas. J. Harrison
Cobalt Mining Investments

BRUNSWICK BUILDING
225 Fifth Avenue

22nd Floor

TELEPHONE, 2412 HARRISON BLD.

CHAS.
A. S. C. 2ND EDITION
PATENT UNION

MANAGER HARRISON
FRANCIS COOK & CO., LTD.
1 NORTHUMBERLAND AVE.
LONDON, W. C.
ENGLAND

Thomas A. Edison Esq.,
Orange, N.J.

My Dear Sir:-

RE YOUR AD IN TODAY'S NEW YORK HERALD IN WHICH YOU
OFFER TO SELL THE "DARBY MINE" NOW OWNED BY YOU AT COBALT ONT.

I beg to say that I would be pleased to hear from you
by return mail, making an appointment when I would come over to Orange
and discuss the matter with you personally.

I have a large Clientele in London England, who
are in the Market for Cobalt property. I have already sold them three
and believe that I could make a deal to dispose of your property for
you, to good advantage.

I have never had the pleasure of meeting you person-
ally, Mr. Edison, but have known all about you for the past 30 years
About 10 years of which time I was the General Eastern Agent for the
Fort Wayne Electric Company and if I can be of any assistance to you
in disposing of your Cobalt mine, I shall be pleased to give you, as
a personal reference, Mr. C. A. Coffin, President of the General Elec-
tric Company.

Awaiting the courtesy of your reply, I beg to remain,

Very truly yours,

Chas. J. Harrison

How many days
ask in phone -

Answers
Oct. 16-1907
Oct. 13th., 1907/

OCT 23 AM 1897

OCT 23 AM 1897
OCT 23 AM 1897
Consolidated Silver Mines

Darby Mine,
Litchford, Ont.
Oct. 15, 1907.

Wilson

These men in my
Mr. Thomas A. Edison Opinion are fakers
Orange, N. J. I want cash

Dear Sir,

Enclosed please find ~~letter~~ and a
flotation proposition from the Canadian Silver Co.
H. C. Barber, who sends the proposition from England,
has been abroad for some months interesting English
capital in the Cobalt district, and is putting on
the market over there the "Silver Rhyolite" mine (No. 3)
which is half a mile west of the Darby mine and
on the same fissure.

The Darby mine is a good, legitimate stock proposition
and a good promoter like Barber ought to be able
to do what he says. If, however, you prefer to make
him some other proposition I will write him or his
Toronto representatives upon hearing from you.

I am,
Respectfully yours,

H. C. C. Wilson

Answers
by Telegram
Oct 16-07

Darby Mine,
Litchford, Ont.
Oct. 16, 1907.

Mr. Thomas A. Edison,
Orange, N. J.

Dear Sir,

I have been asked by one or two parties up the Montreal river what the lowest cash price is for the machinery as it stands, to be taken down and removed by them. Now as the plant stands all set up and in running order, including power-house, it is worth \$10,000. to any of the surrounding claims; and this is the figure I am asking under such conditions.

If, however, the plant is to be taken apart and sledged up the river 25 or 50 miles a different price will have to be put on it.

Figuring up the total cost of everything, including freight and duties, I find that as originally landed at Litchford the cost was in round numbers \$6,000.

What price shall I place on it if it is to be removed? As a second-hand plant how would 60 per cent. do?

I shall close no deal with these people while there is any chance of selling it for \$10,000. to the adjoining claim. I expect to hear from the latter this week.

Respectfully yours, H. M. Wilson

Oct 18. -07

- Wilson

Darby Mine

Lathrop

Oreans

You may sell as low as
four thousand dollars
for machinery

W.D.
B. P. S.

W.D.C. 1.55 P.M. E

60%

Chas. C
ESPC

PHONE MAIN 2415

CABLE ADDRESS "BARTRAM, TORONTO"
WESTERN UNION CODE

SOLUTION FOR THE TRADING BANK OF CANADA
KING AND SPADINA BRANCH

J. Regent Bartram

BARRISTER, SOLICITOR, NOTARY PUBLIC, ETC.

18 KING ST. WEST

TORONTO, Oct. 18th, 1907, 190
CANADA

H. H. Wilson, Esq.,

"Darby Mine,"

Latchford, Ont.

Dear Sir:-

So far as I can ascertain from the members of the Legris Syndicate, they are unwilling to pay the sum of Ten Thousand Dollars for the machinery of the Edison property, until they have shown up their own more fully. What they would however be willing to do would be, to take a lease of the Edison property for three years for the sum of Three Thousand Dollars (\$3,000.) with the right to purchase at any time during the three years, for the sum of Thirty Thousand Dollars, said three thousand dollars to be applied on purchase price and they not to take out any ore from the Edison property during the running of the lease. If this offer is accepted by Mr. Edison we should like to have you associate yourself with us in connection with the development, if you have no other plans. Would you please take this matter up with Mr. Edison, and see what he would be prepared to do.

Yours truly,

Diet. J. B.L.B.

L.A.M.

c. Dandy mine

4446.
FIRST NATIONAL EXCHANGE BANK,
PORT HURON, MICH.
H. S. DARTON, PRESIDENT. W. A. DOWLEY, CASHIER.
J. E. MILLER, VICE PRESIDENT. GUSSE WILLIAMS, CLERK.

NOT 23 1907

Oct. 21, 1907.

*If you refer to the mine which I own
in the Cobalt dist would say that*

Mr. Thos. A. Edmon^d *do not want to give an option
Orange, N. J. but will sell for cash*

Dear Mr. Edmon:-

I am writing you at the request of

Mr. F. S. Philbrick, of this city, who at the present time
is in Latchford, Ont.

He and his friend, Lew Bennett, who also resides
in the city, wish to obtain an option from you on some mining
lands in that vicinity.

I can only state that I am well acquainted
with both the above named parties, having known them for
several years past. They are young men of good habits and
character. They have some means, although I do not know
just how much.

I would regard them as men of highest honor and
do not hesitate to recommend them to your favorable consider-
ation.

I am

Yours respectfully,

W. A. Dowley
Pres.

CABLE ADDRESS
"MORISCOVE"
NEW YORK-LONDON
TORONTO-COBALT

TORONTO OFFICE
TRADERS BANK BLDG.

File into Darby mine papers.

*Answered
Oct 23 07*

Wm. J. Harrison
Cobalt Mining Investments
BRUNSWICK BUILDING
225 Fifth Avenue
New York

TELEPHONE, 2415 MARION 22.
—
GOSSE
A. B. C. 2TH EDITION
HARPER & BROS.
—
REPRINTED BY
FRANCIS & CO. A. CO., LTD.
1 NORTHUMBERLAND AVE.
LONDON, W. C.
ENGLAND

Oct. 22nd--07.

Thomas A. Edison Esq.,
Orange, N.J.

Dear Mr. Edison:-

RE YOUR "DARBY MINE":

*If you refer to mine reaching bit 2000
I told you & already had a cable offer
for that amount. I don't
that don't care to tie the affair
by any kind of agreement*

Since I had the pleasure of discussing this matter with you today, I have thought that you might be inclined to make me a proposition on the mine for \$20,000. \$5,000. cash and \$5,000. every 60 days thereafter until the final payment was made. The title deeds to be put in escrow with the Commercial Trust Company of Jersey City, N.J. and in order that you may not be firmly bound to me by such a letter, you might insert the words "subject to prior sale", so that if I am unable to make a sale of the mine for you, it will not prevent you in any way, from doing it yourself.

It is quite likely that I will sail on Saturdays steamer for London and would be glad to have this letter from you to take along with me. It will show that I have your authority to make a sale, as at the present time I only have before me the data that appeared in your advertisement in the New York Herald, a week ago last Sunday. Inside a week after I arrive in London I will be able to cable you, if I can close a deal and you will note by my letter head that my cable address is London is "MORISCOVE LONDON" and I would not be much surprised if I could make a deal for you.

Kindly let me hear from you by Friday morning. With many thanks for the courtesies extended to me today, I beg to remain,

Very truly yours,

W. J. Harrison

"Queen's Hotel"

OCT 24, 1907

North Bay, Ont. Oct 24, 1907.

5000 + 30 Dk TAG

Mr. Thomas H. Edison,
Orange, N. J.

Dear Sir,

I am negotiating with some Cleveland people, through Wakefield the American Consul here, for the sale of the machinery and camp furnishings.

These people have been dealing with Richardson for some time for the purchase of his property just west of the Darby Mine, and if they obtain his claim they will want a plant to operate it.

I have told them through Wakefield that the price is \$5,000, cash for the machinery

"Queen's Hotel"

2

North Bay, Ont. 190

including boat, wagon, sleigh, and camp equipment, which is a pretty good price for it all as it is now all second-hand.

If they purchase at that price they want the privilege of operating it where it stands, extending the pipe-line across to Richardson's property to the point where they intend to begin operations. (They will have to buy an additional 500 ft. or more of 4" pipe). Our shafts and drifts they will not use at all, unless developments warrant the purchasing of the Darby Mine later on. I told Wakefield

"Queen's Hotel" (3)

North Bay, Ont. 190

that probably such a deal could be made providing they are willing to pay a reasonable rental per month.

It would really be better to have the camps occupied and kept in repair than to close them up and allow them to fall to pieces.

By this sale you will dispose of the perishable part and still retain the mine, and if Richardson's or the other claim on our north turn out well the owners of one or the other will probably buy the Darby claim.

Would it not be better to

"Queen's Hotel" (4)

North Bay, Ont. 190

sell the second-hand plant for \$5,000 and allow it to remain on the property at a nominal monthly rental than to sell it and have it removed up the river?

If you approve of this deal please state what monthly rent you want for the site and use of the 40 acres, addressing me at Lakesford. How would \$30. per month do?

I put these advertisements in the Toronto papers last week, and one this week. I have not had any enquiries, not even a postal card asking the price. I have therefore not put in

"Queen's Hotel"

5

North Bay, Ont. 190

the other two advertisements this week. Everything is dead up here. Claims up the Montreal river which could have been sold for \$40,000. a few months ago cannot now find a buyer for \$10,000.

By selling the plant and retaining the mine I believe within a year you will be able to get \$25,000 for it. Development of the two adjoining claims will undoubtedly make the Darby mine a desirable property.

I am,

Respectfully,

H. M. Wilson.

A report was received from Cobalt that silver had been found at the bottom of the 100-foot shaft of the Tomlinson Mining Company, this property has previously been leased for the extensive deposits of cobalt ore.

Darby Mine,
Latchford, Ont.
Nov. 1, 1907.

Mr. Thomas A. Edison,
Orange, New Jersey.

Dear Sir,

Yours of Oct. 29th at hand, regarding rental of camp, &c. The Cleveland people are still negotiating with Richardson of North Bay for his claim west of us, but no sale has yet been closed.

I have had only two enquiries in answer to the Toronto advertisements, and neither of them amounts to anything.

During the past two weeks, whenever the weather permitted, I have been taking various supplies back to Latchford where I have been able to dispose of a quantity of canned goods, flour, &c. Today I am going to take the horses down, and early next week I shall close up the camp for good if the Cleveland deal falls through. Everything is dead up here, and this money trouble in New York and elsewhere has scared everybody.

The enclosed clipping refers to the Little & Van Hise mine, which hitherto has been a purely cobalt proposition, as you know. The rich Nova Scotia mine was all cobalt on top too. I feel more convinced than ever that this firmure we are on is rich in silver deeper down. You will doubtless get some good offers for the mine later on when times improve.

I am, Respygours, H. C. W. Wilson.

Darby Mine,
Litchford, Ont.
Nov. 5, 1907.

C. Mr. Thomas H. Edison,
Orange, N. J.

Dear Sir,

Yesterday Mr. Wakefield, the American Consul at North Bay, accompanied by two of the Cleveland syndicate, came up here to examine Richardson's property and our machinery, &c. They returned last night to Cleveland to confer with their associates, and have promised to telegraph me definitely one way or the other by Saturday at the latest. I held out for \$5,000. cash for the plant and \$30.00 per month rental of the camps, although they tried to beat me down all around.

It will cost them at least \$8,000. to put in a new plant on Richardson's property including 3 or 4 months' loss of time, so if they mean business this opportunity to buy this plant and retain it on the Darby mine ought to be a good bargain for them.

If these people do not take it there is a man at Cobalt, who represents some Pittsburg people, and who wants to put a diamond drill on here, conducting all operations at their expense, providing they can have the use of the plant and be given a reasonable option. They are not ready to do anything yet, but I will see him again before I leave next week, if this steel falls through.

I am, Respy yours,
H. M. Wilson.

Barby Mine

Wages not paid, owing to
men jumping their jobs and not
calling 'again for pay'
See pay-roll book.

Week ending May 5, '06

P. English

11.50

Week ending July 13 '07

F. Dague

6.75

W. Dague

4.50

Week ending Oct. 26 '07

F. Picard

14.06

\$36.81

Hanniboy

Cash from A. M. Br.

106.59

deposited in
Bank Nov 23. 1907

143.40

TEMISKAMING AND NORTHERN ONTARIO RAILWAY

North Bay STATION Dec. 2nd. 1909

Thos. B. Edison Esq.

Orange N.J

Dear Sir.

I understand that the machinery your Mr. H. M. Wilson installed on your mining claims on Montreal River near Latchford, is lying idle. I have a group of good claims in that vicinity which I wish to try out this winter, and desire to procure the use of your boiler and compressor.

Would you sell or rent same?

Please reply at an early date.

J. V. Miller
 Say we will call at 75%
 Yours truly
 of dead cost at mine
John J. Caley

Add., Box 593

North Bay Ont

J. E. DEARBORN & CO.,
MINING INVESTMENTS.

GOLD, SILVER,
COPPER, LEAD AND ZINC MINES.

Boston, Mass., Dec. 14th, 1907.

Thomas A. Edison, Esq.,
Orange, New Jersey.
Dear Sir:-

1. I am well acquainted with Mr. H. M. Wilson who had charge of your Darby Mine at Cobalt. He was in to see me the other day and said the mine was for sale. My business is the selling mining properties and I have had an inquiry from some person for this property. Now I have written to Mr. Wilson and he has given me a good description of the property. If you will tell me your price and terms subject to a 10% commission paid to me, I will take up nothing until you are paid or the mine in no way tied up to me. I will endeavor to find a purchaser. Also I wish the privilege of advancing the price to the purchasers \$5,000, so there would be a good legitimate profit to me in case of sale. I will refer you to Mr. Wilson who I have known for some years.

Say The price of the Mine - Yours truly,
Quadrachy is Thirty thousand
Cash - Don't want to ~~hand~~ give
any option or make any promise -

14th, 1907.
W - ~~How about~~
~~this new~~ ~~see me~~
about it
J. M. Wilson
alt. He was
mine was for

Dorby Mine - Sale
25 COPPOHAS STREET,
BOSTON, MASS., U. S. A.

CABLE ADDRESS
"J. E. DEARBORN, BOSTON"
TELEPHONE NUMBER, MAIN 5724.

J. E. DEARBORN & CO.,

MINING INVESTMENTS,

GOLD, SILVER,
COPPER, LEAD AND ZINC MINES.

Boston, Mass., Dec. 21st, 1908.

Thomas A. Edison, Esq.,

Orange, N. J.

Dear Sir:-

Your favor of Dec. 19th received. Messrs. Eggert & Burroughs of Ont. have asked me about this property and I have written them a description that Mr. Wilson gave me and told them that the price was \$35,000. so this will leave me some profit in case they take the property. I do not consider that I have given them an option or do I consider that I have an option but simply if they should sell the property I should make some profit.

Yours truly,

J. E. Dearborn

**PUBLICATION AND MICROFILM
COPYING RESTRICTIONS**

Reel duplication of the whole or of any part of this film is prohibited. In lieu of transcripts, however, enlarged photocopies of selected items contained on these reels may be made in order to facilitate research.

A Note on the Sources

The pages which have been filmed are the best copies available. Every technical effort possible has been made to ensure legibility.

213

END

FINANCIAL CONTRIBUTORS

PRIVATE FOUNDATIONS

The Alfred P. Sloan Foundation
Charles Edison Fund
The Hyde and Watson Foundation
National Trust for the Humanities
Geraldine R. Dodge Foundation

PUBLIC FOUNDATIONS

National Science Foundation
National Endowment for the
Humanities
National Historical Publications and
Records Commission

PRIVATE CORPORATIONS AND INDIVIDUALS

Alabama Power Company
Anonymons
AT&T
Atlantic Electric
Association of Edison Illuminating
Companies
Battelle Memorial Institute
The Boston Edison Foundation
Cabot Corporation Foundation, Inc.
Carolina Power & Light Company
Consolidated Edison Company of New
York, Inc.
Consumers Power Company
Cooper Industries
Corning Incorporated
Duke Power Company
Entergy Corporation (Middle South
Electric System)
Exxon Corporation
Florida Power & Light Company
General Electric Foundation
Gould Inc. Foundation
Gulf States Utilities Company
David and Nina Heltz
Hess Foundation, Inc.
Idaho Power Company

IMO Industries
International Brotherhood of Electrical
Workers
Mr. and Mrs. Stanley H. Katz
Matsushita Electric Industrial Co., Ltd.
Midwest Resources, Inc.
Minnesota Power
New Jersey Bell
New York State Electric & Gas
Corporation
North American Phillips Corporation
Philadelphia Electric Company
Phillips Lighting B.V.
Public Service Electric and Gas Company
RCA Corporation
Robert Bosch GmbH
Rochester Gas and Electric Corporation
San Diego Gas and Electric
Savannah Electric and Power Company
Soehring-Plough Foundation
Texas Utilities Company
Thomas & Betts Corporation
Thomson Grand Public
Transamerica Delaval Inc.
Westinghouse Foundation
Wisconsin Public Service Corporation

BOARD OF SPONSORS

Rutgers, The State University of New
Jersey

Francis L. Lawrence

Joseph J. Seneca

Richard F. Foley

David M. Oshinsky

New Jersey Historical Commission

Howard L. Green

National Park Service

John Maounis

Maryanne Gerbaeckas

Roger Durham

George Tselos

Smithsonian Institution

Bernard Finn

Arthur P. Molella

EDITORIAL ADVISORY BOARD

James Brittain, Georgia Institute of Technology

R. Frank Colson, University of Southampton

Louis Galambos, Johns Hopkins University

Susan Hockey, University of Alberta

Thomas Parke Hughes, University of Pennsylvania

Peter Robinson, Oxford University

Phillip Scranton, Georgia Institute of Technology/Hagley Museum and Library

Merritt Roe Smith, Massachusetts Institute of Technology

THOMAS A. EDISON PAPERS

Robert A. Rosenberg
Director and Editor

Thomas E. Jeffrey
Associate Director and Coeditor

Paul B. Israel
Managing Editor, Book Edition

Heien Endick
Assistant Director for Administration

Associate Editors
Theresa M. Collins
Lisa Gitelman
Keith A. Nier

Assistant Editors
Louis Cariat
Aldo E. Salerno

Research Associates
Gregory Jankunis
Lorie Stock

Secretary
Grace Kurkowski

Student Assistants

Amy Cohen
Bethany Jankunis
Laura Konrad
Vishal Nayak

Jessica Rosenberg
Stacey Saeg
Wojtek Szymkowiak
Matthew Wosniak

Thomas A. Edison Papers
at
Rutgers, The State University
endorsed by
National Historical Publications and Records Commission
18 June 1981

Copyright © 1999 by Rutgers, The State University

All rights reserved. No part of this publication including any portion of the guide and index or of the microfilm may be reproduced, stored in a retrieval system, or transmitted in any form by any means—graphic, electronic, mechanical, or chemical, including photocopying, recording or taping, or information storage and retrieval systems—without written permission of Rutgers, The State University, New Brunswick, New Jersey.

The original documents in this edition are from the archives at the Edison National Historic Site at West Orange, New Jersey.

ISBN 0-89093-703-6

Thomas A Edison Papers

A SELECTIVE MICROFILM EDITION

*PART IV
(1899-1910)*

Thomas E. Jeffrey
Lisa Gitelman
Gregory Jankunis
David W. Hutchings
Leslie Fields

Theresa M. Collins
Gregory Field
Aldo E. Salerno
Karen A. Detig
Lorie Stock

Editors

Robert Rosenberg
Director and Editor

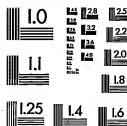
Sponsors
Rutgers, The State University Of New Jersey
National Park Service, Edison National Historic Site
New Jersey Historical Commission
Smithsonian Institution

University Publications of America
Bethesda, MD
1999

Edison signature used with permission of McGraw-Edison Company



MICROCOPY RESOLUTION TEST CHART
(ANSI and ISO TEST CHART No. 2)



APPLIED IMAGE, Inc.
1053 East Main Street
Rochester, New York 14609

14:1